

**UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WISCONSIN**

ULTRATEC, INC. and CAPTEL, INC.,

Plaintiffs,

v.

**SORENSEN COMMUNICATIONS, INC.
and CAPTIONCALL, LLC,**

Defendants.

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Civil Action No.: 3:13-CV-346-BBC

Judge: Barbara. B. Crabb

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OUTSIDE COUNSEL ONLY -
PROSECUTION BAR**

**INVALIDITY REPORT OF JAMES A. STEEL UNDER RULE 26(A)(2)(B) OF THE
FEDERAL RULES OF CIVIL PROCEDURE REGARDING U.S. PATENT 8,379,801**

I. INTRODUCTION

My name is James A. Steel, Jr. and I have been retired since 2009. Prior to my retirement, I worked in the telecommunications-for-the-deaf industry since 1971. I have also worked in the Telecommunications Relay Service (“TRS”) industry since 1988. I have been engaged by Quarles & Brady LLP, on behalf of Ultratec, Inc. and CapTel, Inc. (“Plaintiffs”), to study U.S. Patent 8,379,801 (hereinafter referred to as “the ‘801 Patent”), titled “Methods and Systems Related to Text Caption Error Correction.” A copy of the ‘801 Patent is attached as Exhibit C. I was asked to study the aforementioned patent, the prosecution history and the prior art patents and references identified in this report. It is my opinion that at the time of the purported invention, the asserted claims of the '801 Patent were either expressly taught or would have been obvious to one of ordinary skill in the art in view of the disclosures in the prior art patents and publicly available reports and literature.

A copy of my CV is included as Exhibit A. I have not testified in court or been deposed as an expert witness in the past four years. A list of the documents which I received from counsel or reviewed in connection with this report is included as Exhibit B. I am being compensated at the rate of [REDACTED] per hour plus expenses for my services in this case, which is not dependent on the outcome of the case.

I reserve the right to supplement or modify this report based on any new materials, testimony, documents, rulings by the Court, or other information that may arise in this case.

A. EXPERT QUALIFICATIONS AND BACKGROUND.

I became involved in the TRS industry in the spring of 1988. At that time, a volunteer relay service was operating under the name of TEDI (Telecommunications Exchange for the Deaf, Inc.) in Vienna, VA. TEDI was looking for a computerized workstation for their operators. I developed the first computerized relay workstation that included an IBM AT model computer, Phone-TTY modem and a custom headset switching device for TEDI. The software for this workstation became known as CARS which stands for Computer Assisted Relay System. My next project was with Sprint in Overland Park, KS. Sprint received a contract to provide statewide TRS for Texas and I worked with the Sprint engineers to develop a hardware and software TRS solution for its new TRS center in Texas.

I went on to help various phone companies construct TRS centers all over the United States and Canada. The Federal Communications Commission (FCC) mandated that new features be added to TRS centers during the 1990's and later. I assisted in developing and implementing upgrades to centers using the CARS software and hardware. I also worked on developing some of the features being mandated by the FCC, including services for the speech impaired, voice recording and playback, toll billing, statistics generation and 911 center access. I

experimented with video relay (VR), text to speech and voice privacy for TRS centers. I was a consultant to AT&T Bell Labs for TRS platform technology during the late 1990's.

Relay operator efficiency became the focus of TRS centers in the late 1990's and on. I worked on decreasing the TRS call set up time by developing a caller-ID database that decreased the time it takes for the TRS operator to reach the outbound party. That database also stored frequently dialed numbers and other preferences for the caller. I also worked with the TRS centers in adapting new switching technology for increased efficiency.

I worked on the project of installing automatic error correction technology to the SPRINT TRS operator platform. I assisted in the software specification document, coded the platform software, and assisted in testing.

The year 2000 and later brought new service requirements by the FCC. TRS centers were required to provide ISDN and VOIP access for their users. The equipment at each center had to be upgraded to accommodate these requirements. Cell phone access was the next challenge. I provided consulting services to several carriers to make TRS accessible to cell phone users. I filed a patent application related to Internet access in telecommunication relay service in November 2003, and the patent was granted on September 30, 2008, as United States Patent No. 7,430,283.

B. SUMMARY OF LEGAL STANDARDS FOR INVALIDITY.

I understand that the claims of a patent define the invention. The specification describes the invention and may be used to construe the terms of a patent claim, but the claims define the patented invention. I also understand that one cannot import a limitation from the specification into a patent claim. The specification may be used only to construe a claim term and not to impose additional claim limitations.

I understand the law of patent invalidity to be as follows. I understand that a patent claim may be found invalid if it is anticipated or rendered obvious by prior art. I have considered references such as patents and publications to be prior art to the '801 Patent if they were patented or published prior to the earliest alleged invention date of the '801 Patent.

It is my understanding that to anticipate a patent claim, a single prior art reference must disclose all of the elements of the claim either explicitly or inherently. It is my understanding that a claim limitation or the entire invention is inherent and in the public domain if it is the natural result flowing from the explicit disclosure of the prior art. As discussed below, it is my opinion that many of the claims of the '801 Patent are anticipated by the prior art.

It is my understanding that to render a patent claim invalid for obviousness, a prior art reference or combination of prior art references must teach or suggest to one of ordinary skill in the art the elements of the claim and/or there must be some reasoning for (i) why it would have been obvious to modify or combine the teachings of the prior art references to arrive at the claimed subject matter or (ii) why it would have been obvious by one of ordinary skill in the art to try the combination of prior art references to arrive at the claimed subject matter. I understand that the prior art does not need to directly address the precise teachings of a patented invention. The reasoning as to why combining multiple references would be obvious, or obvious to try, can be found in the common sense of those skilled in the art and need not be explicitly articulated or suggested in any prior art reference. I also understand that a patent claim is more likely to be obvious when it recites only a combination of known elements, where each element performs the same function that it was known to perform, and where the combination does no more than yield predictable results. I further understand that a patent is obvious if there are only a finite number of identified, predictable solutions with a reasonable expectation of success to choose from in

developing the patented material. I understand that the invalidity analysis is made through the eyes of one of ordinary skill in the art at the time of the alleged invention, and that one of ordinary skill in the art is not an automaton, but rather one of ordinary creativity, logic, judgment and common sense.

As explained in more detail below, to the extent any of the asserted claims are not anticipated, then it is my opinion that they are obvious in light of the prior art discussed herein. Though I understand that there may be other considerations that tend to show a claim is not obvious (such as a long felt need in the art for the patented device, or unexpected results achieved by the patented device), I believe that methods and systems of displaying error corrections in real-time transcription applications (i.e., TRS systems) was a mature field and was predictable by the prior art date of the '801 Patent. Furthermore, combining known components like in-line error correction software into a well known relay system described in the '801 Patent would have been a fairly simple endeavor within the technical grasp of one of ordinary skill in the art and would have produced only predictable results. It is my understanding that when such a combination fails to produce an unexpected result, it is likely the product of common sense and logic rather than of innovation.

C. QUALIFICATIONS OF THOSE OF ORDINARY SKILL IN THE ART.

In my opinion, a person of ordinary skill in the art for the purpose of the alleged invention disclosed in the '801 Patent is a person that possessed an undergraduate degree in one or more of the following areas: electrical engineering, computer science, or computer information systems. A person of ordinary skill in the art would also have a general knowledge of programming software applications for real-time transcription, and a general knowledge and understanding of the telecommunications needs of the deaf and hard-of-hearing and the design

goals and limitations of existing telecommunications technology for the deaf and hard-of-hearing.

D. CLAIM CONSTRUCTION.

It is my understanding that claim terms are given their broadest reasonable construction in light of the specification. Most claim terms in the '801 Patent should be given their plain and ordinary meaning. However, for sake of clarity, I construed the term "block of text" to mean "at least one word, sentence or line of text." I believe this construction is appropriate in light of the '801 Patent and its specification, and how a person of ordinary skill in the art would have understood that term at the time of the purported invention. I understand that Sorenson and CaptionCall have proposed that "block of text" be construed to mean "a text transcription from a speech recognition program." I disagree with this construction and the claims themselves do not require that that text be so-generated. However, if the Court were to adopt Sorenson and CaptionCall's construction, my opinions that the asserted claims are invalid for the reasons stated below do not change.

I understand that Sorenson and CaptionCall have proposed that the term "tagging" be construed to mean "identifying with an identifier," that "tag" (verb) be construed to mean "identify with an identifier" and that "tag" (noun) be construed to mean "an identifier." I believe that these terms can merely be given their plain and ordinary meaning, but my opinions below regarding invalidity are the same regardless of which construction is used.

I understand that Sorenson and CaptionCall have proposed that the term "communication device" be construed to mean "captioned telephone or telephone enabled for text enhanced telephony." I do not agree with that construction and believe that this word can simply be afforded its plain and ordinary meaning. If it does need to be construed, I believe that a better

construction is "a device that enables communication between users." Again, my opinions that the asserted patent claims are invalid remain regardless of which construction is adopted, for the reasons discussed below.

I understand that Sorenson and CaptionCall has proposed that the term "revoicing" be construed as "repeating." I believe that this term can be given its plain and ordinary meaning, but my opinions below regarding invalidity are the same regardless of which construction is used.

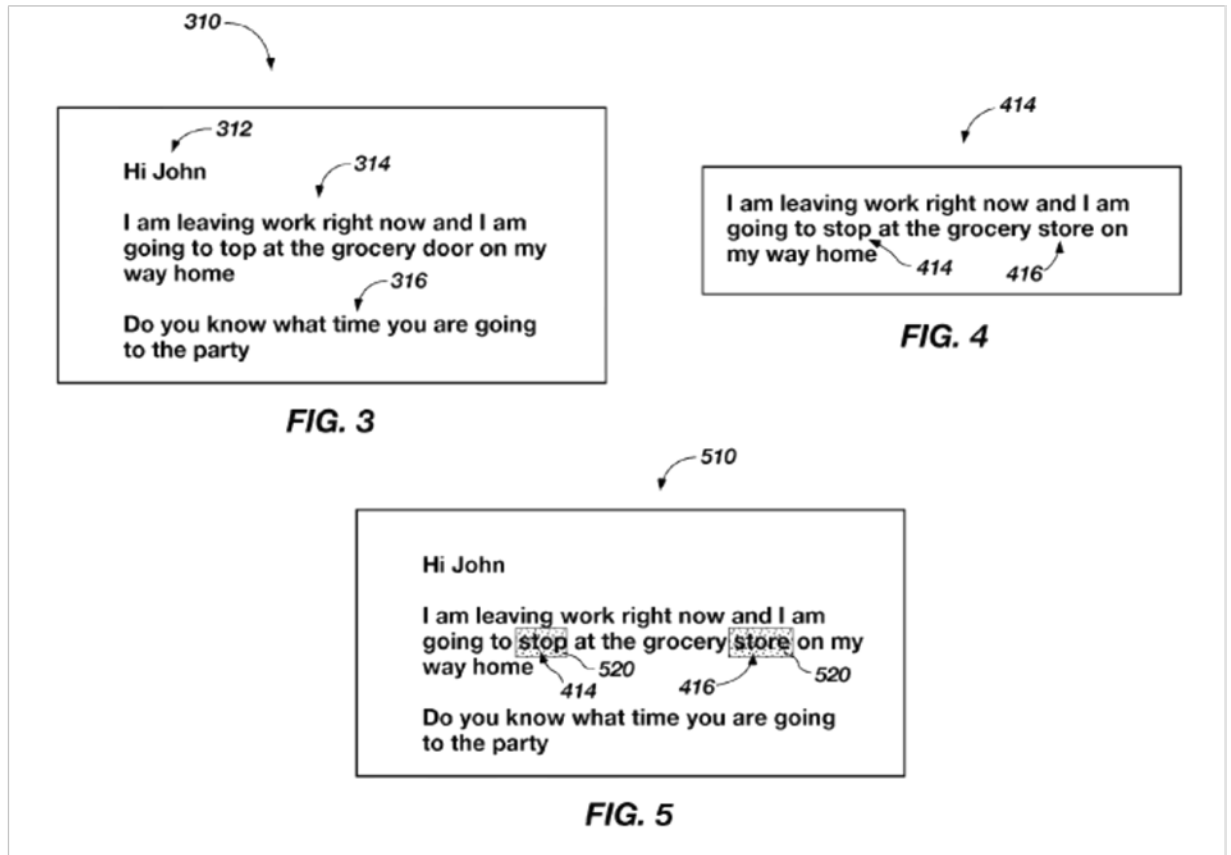
II. OPINIONS.

A. ASSERTED CLAIMS OF THE UNITED STATES PATENT NO. 8,379,801 ARE ANTICIPATED BY THE PRIOR ART.

1. SUMMARY OF THE '801 PATENT.

The '801 Patent is generally directed towards a method of displaying error corrections on a user's screen, which can be done in a variety of settings including using a correction application within a relay system. The relay system described in the specification of the '801 Patent is, generally, a captioned telephone service (or, CTS) was well known prior to the priority date of the '801 Patent. The relay system consists of a hearing user and hard-of-hearing user initiating a conversation over a communication line. The hearing user's voice is sent to the hard-of-hearing user's device and to the call assistant at the relay center. The call assistant re-voices the spoken words of the hearing user and the voice recognition software transcribes the spoken words creating at least one block of text captions. This transcribed block of text is then transmitted by the relay to the hard-of-hearing user's device where the hard-of-hearing user may read the transcription on the display of their device. Apart from this known relay set up, the '801 Patent really just describes ways to display an error correction on a user's screen. In the context of a relay, correction is accomplished by having the call assistant identify errors in the first block

of captioned text, generate a second block of text with the correct word or text (the second block of text being displayed on the call assistant's computer screen), and then transmit the second/corrected block of text to the hard-of-hearing user's device so that it replaces the first block of text. The corrected block of text can contain tagging (i.e., highlighting or underlining) for easy identification by the parties to the conversation. Below are Figures 3-5 from the '801 Patent which show how the error corrections are displayed.



In Figure 3, the text shown includes erroneous words “top” and “door,” which could have resulted from voice recognition inaccuracy. In Figure 4, the call assistant has replaced the word “top” with “stop,” and the word “door” with “store.” In Figure 5, the corrected words “stop” and “store” are displayed to the user with highlighting to indicate they are corrections.

2. THE BRIDGE VIDEO PUBLICATION ANTICIPATES CLAIMS 1-18, AND 29 OF THE 8,379,801 PATENT.

a. OVERVIEW OF BRIDGE VIDEO PUBLICATION.

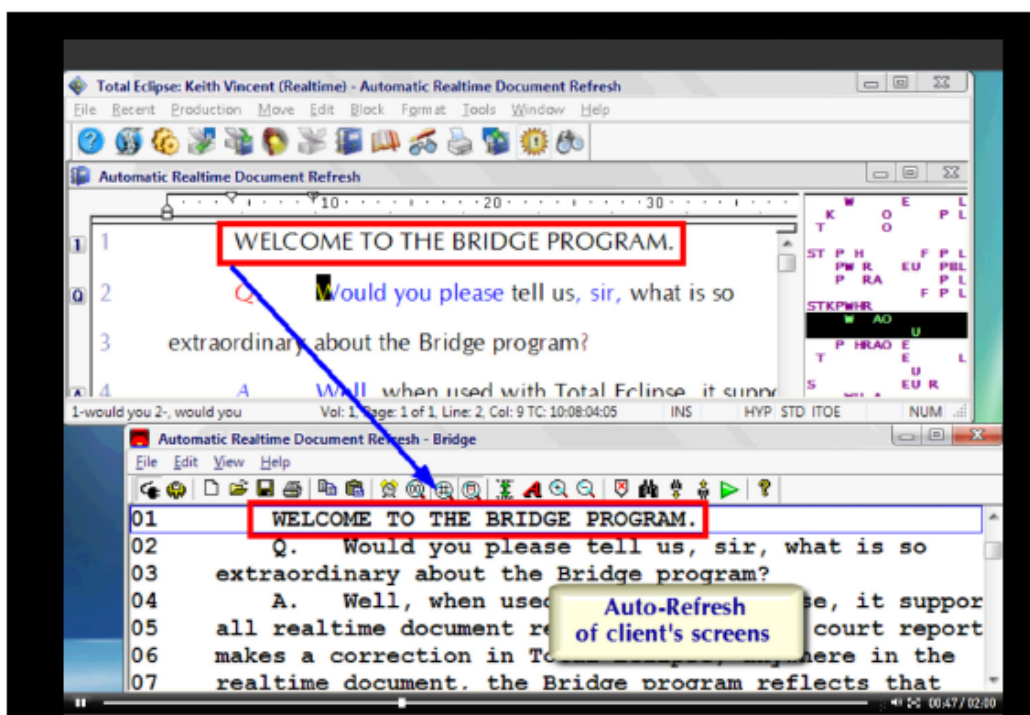
Based on my review of the Bridge Video Publication (UTI00002049-71), the corresponding video files, and the '801 Patent, it is my opinion that the Bridge Video Publication anticipates at least Claims 1-18, and 29 of the '801 Patent. Claims 1, 9, 14, 17 and 29 of the '801 Patent are independent claims.

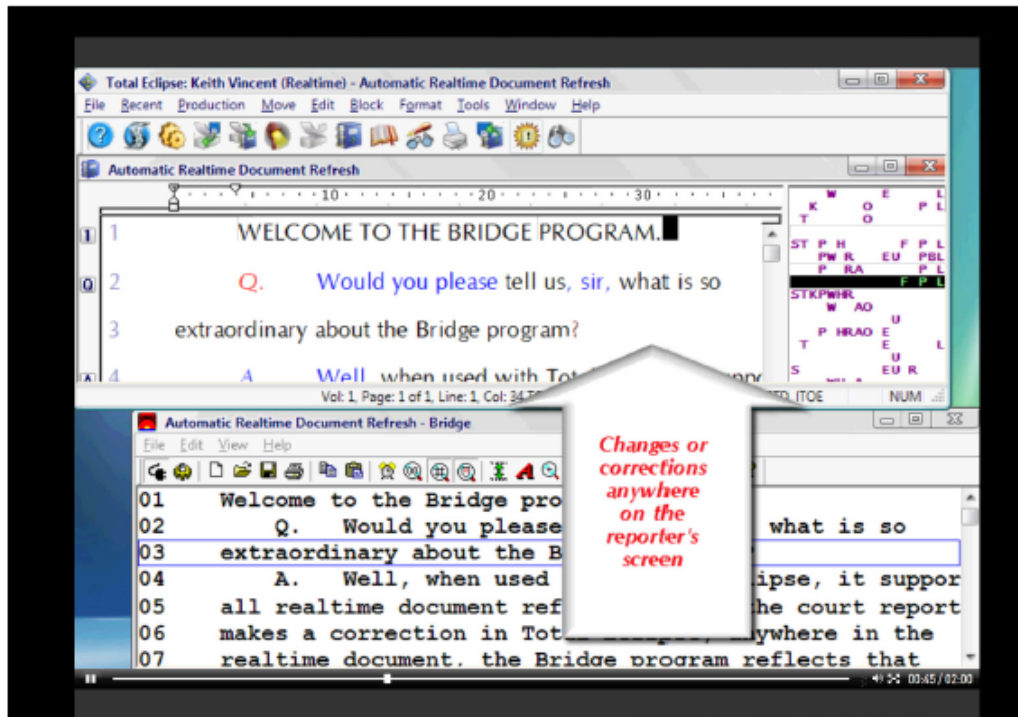
Based on materials that I have reviewed, the Bridge Video Publication was publicly accessible online as early as January 2, 2008 (earlier than the priority date of the '801 Patent). This video was publicly available and easily accessible by performing a simple internet search in a search engine. One skilled in the art in the mid to late 2000s would have performed internet searches when researching the available error correction display methods used in real-time editing applications.

Independent Claim 1 of the '801 Patent is a method claim and independent Claim 9 of the '801 Patent is a system claim. The only difference between these two claims is that Claim 1 is a method claim and Claim 9 describes a computer hardware configuration that performs the exact method as described in Claim 1. Therefore, my analysis of Claim 1 is the same as Claim 9. The first step in Claim 1 describes displaying a block of captioned text on at least one electronic device. The second step describes replacing the first block of text captions with another block of text captions during a real-time conversation. The third and final step displays the replaced block of text on the same electronic device (the at least one electronic device) that displayed the first block of text.

As illustrated in more detail in the claim chart of section II(A)(2)(b) below, the Bridge Video Publication discloses all of the elements of Claims 1 and 9 of the '801 Patent. The Bridge

Video Publication discloses a method of providing real-time error correction during a court reporter's transcription of testimony. The Bridge Video Publication discloses displaying a block of text, created while a court reporter transcribes the voice of a testifying witness, on the court reporter's computer (at least one electronic device). The Bridge Video Publication further discloses a court reporter identifying mistakes in the transcription, correcting those identified mistakes, then replacing the first block of captioned text with the corrected block of captioned text. Finally, the block of corrected captioned text is displayed on the court reporter's computer. Therefore, the Bridge Video Publication discloses each element of Claims 1 and 9. Below are some screen shots taken from the video showing how errors were corrected in the Bridge application.





Notably, independent Claims 1 and 9 of the '801 Patent never refer to performing "in-line" correction or any other specific error correction method. Furthermore, these two claims do not refer to tagging a corrected text caption. In fact, the concepts that are referred to as "in-line" correction or tagging are not mentioned until the dependent claims of Claim 1 or 9. It is my understanding that a dependent claim contains all of the claim elements disclosed in the independent claim that it references, plus adds the additional limitation disclosed in the dependent claim. Therefore, one cannot construe Claim 1 or Claim 9 to perform in-line correction or tagging because these additional limitations are found in a dependent claim that provides additional limitations to Claim 1 or Claim 9 (*see* Claims 4, 5, 10, and 12). Construing Claim 1 or 9 to include in-line correction or tagging would render the dependent claims meaningless. Also, a person of ordinary skill in the art would not construe any claim term in Claim 1 or 9 to mean in-line correction or tagging, especially because these limitations are found in the dependent claims.

Claim 2 of the '801 Patent is dependent on Claim 1 and adds the additional limitation of identifying errors within a text caption with respect to what was said prior to generating the another block of text.. As mentioned above, the Bridge Video Publication discloses identifying an error in the text caption and then replacing the error with the correct text. Therefore, the Bridge Video Publication discloses each element of Claim 2 and this Publication further discloses replacing the errors with the correct text.

Claim 3 of the '801 Patent is dependent on Claim 1 and adds the additional limitation of generating another block of text within the first electronic device and then transmitting that block of text to the at least first electronic device. The Bridge Video Publication discloses generating a corrected block of transcribed text after the court reporter identifies and corrects a mistake in the captioned text. This reference further discloses transmitting the corrected block of captioned text to the at least first device (the court report's computer) and also a second electronic device (the client's device). Therefore, the Bridge Video Publication discloses each element of Claim 3.

Claim 4 of the '801 Patent is dependent on Claim 3 and adds the additional limitation that generating a corrected block of captioned text includes: (1) identifying one or more errors in the first block of captioned text; and (2) generating a corrected block of captioned text when corrections are made by the court reporter; and then (3) replacing the first block of captioned text with the corrected block of captioned text. The Bridge Video Publication discloses a court reporter identifying at least one error in the transcribed captioned text and having the court reporter use some means to correct the text. The Bridge Video Publication also discloses the court reporter correcting the first block of captioned text which generates a corrected block of captioned text containing the corrections made. The court reporter then transmits the corrected block of captioned text to the client's device. The transmitted corrected text caption replaces the

first block of uncorrected text captions. Therefore, the Bridge Video Publication discloses each element of Claim 4.

Claim 5 of the '801 Patent is dependent on Claim 4 and adds the additional limitation that the corrected block of text is tagged. The Bridge Video Publication discloses that the corrected block of text may be tagged by either changing the text color or replacing the corrected text in all capital letters. Therefore, the Bridge Video Publication discloses each element of Claim 5.

Claim 6 of the '801 Patent is dependent on Claim 5 and adds the additional limitation that tagging the corrected text comprises highlighting the corrected text within the text caption. The Bridge Video Publication discloses that the corrected text is highlighted after the court reporter corrects the errors by either changing the color of the corrected text or replacing the corrected text in all capital letters. Therefore, the Bridge Video Publication discloses each element of Claim 6.

Claim 7 of the '801 Patent is dependent on Claim 1 and adds the additional limitation that the first block of text caption includes an error, while the another block of text contains corrected words. The Bridge Video Publication discloses errors being present, identified by the court reporter, and corrected via a new block of text. Therefore, the Bridge Video Publication discloses each element of Claim 7.

Claim 8 of the '801 Patent is dependent on Claim 1 and adds the additional limitation that the text caption is generated on a first device and then transmitted to at least one electronic device. The Bridge Video Publication discloses generating a first text caption on a court reporter's computer when the court reporter transcribes a witness' testimony. This generated text caption is then transmitted to both the court reporter's computer (the at least one electronic

device) and the client's computer screen. Therefore, the Bridge Video Publication discloses each element of Claim 8.

Claim 10 of the '801 Patent is dependent on Claim 9 and adds the additional limitation of tagging the corrected text caption. The Bridge Video Publication discloses that the corrected block of text may be tagged by either changing the text color or replacing the corrected text in all capital letters. Therefore, the Bridge Video Publication discloses each element of Claim 10.

Claim 11 of the '801 Patent is dependent on Claim 9 and adds the additional limitation of displaying the corrected block of text that has replaced the first uncorrected block of text. The Bridge Video Publication discloses the court reporter correcting the first block of captioned text which generates a corrected block of text containing the corrections made. The court reporter then transmits the corrected block of text to the client's device. The transmitted corrected text replaces the first block of uncorrected text. Therefore, the Bridge Video Publication discloses each element of Claim 11.

Claim 12 of the '801 Patent is dependent on Claim 9 and adds the additional limitation of the highlighted word being indicative of the corrected word. The Bridge Video Publication discloses that the corrected text is highlighted after the court reporter corrects the errors by either changing the color of the corrected text or replacing the corrected text in all capital letters. Therefore, the Bridge Video Publication discloses each element of Claim 12.

Claim 13 of the '801 Patent is dependent on Claim 9 and adds the additional limitation of having an application program replace the first block of text caption with a second block of text and displaying the second block of text on a display of a communication device substantially simultaneously with replacing the first block of text. The Bridge Video Publication discloses a court reporter making error corrections to a first block of text in a transcription, thus generating a

corrected second block of text. The corrected second block of text is transmitted to the client's computer screen and replaces the first block of captioned text with the corrected block of captioned text. The Bridge Video Publication shows that displaying the corrected second block of captioned text happens almost simultaneously to the replacement of the first block of captioned text with the corrected second block of captioned text. Therefore, the Bridge Video Publication discloses each element of Claim 13.

Claim 14 is an independent claim directed to instructions saved on a storage device that when executed instructs the computer to perform a series of method steps. The method steps include: (1) displaying a block of captioned text created by transcribing a voice signal, where this block of captioned text has been transmitted between a first and second device; and (2) displaying a second block of captioned text on the first or second device by replacing the first block of captioned text with this second block. This independent claim is almost identical to independent Claims 1 and 9 except that it requires instructions on a storage device that when executed instruct a computer to perform the steps of Claims 1 and 9. Therefore, using the same analysis as stated in Claim 1 above, the Bridge Video Publication discloses each element of Claim 14.

Claim 15 of the '801 Patent is dependent on Claim 14 and adds the additional limitation that displaying the another block of text (corrected text) includes identifying and tagging at least one word within the another block of text. The Bridge Video Publication discloses that the corrected block of text in the court reporter's transcription (another block of text) may be tagged by either changing the text color or replacing the corrected text in all capital letters. Therefore, the Bridge Video Publication discloses each element of Claim 15.

Claim 16 of the '801 Patent is dependent on Claim 15 and adds the additional limitation that tagging the corrected text comprises highlighting the corrected text. The Bridge Video Publication discloses that the corrected text is highlighted after the court reporter corrects the errors by either changing the color of the corrected text or replacing the corrected text in all capital letters. Therefore, the Bridge Video Publication discloses each element of Claim 16.

Claim 17 of the '801 Patent is an independent claim. This method claim includes the following elements: (1) generating a first text caption as a transcription of a voice signal; (2) transmitting this first text caption to a communications device; (3) identifying an error within the first text caption; and (4) transmitting a corrected block of text as an in-line correction to replace the erroneous text in the first text caption with the corrected block of text. Unlike independent Claims 1, 9 and 14, Claim 17 includes in-line correction as a claim limitation, though not tagging. The Bridge Video Publication discloses each of the elements in this claim. First, the Bridge Video Publication discloses a court reporter transcribing the testimony of a witness, thus generating a first block of captioned text. The Publication also discloses a court reporter transmitting this first generated block of captioned text to the client's computer screen. The court reporter may identify an error during a real-time transcription and then correct that error, generating a corrected block of captioned text. The Publication discloses an Auto-Refresh protocol that automatically transmits the corrected block of text to the client's computer screen, thus displaying the corrected block of captioned text on both the client's screen and the court reporter's device. Therefore, the Bridge Video Publication discloses each element of Claim 17.

Claim 18 of the '801 Patent is dependent on Claim 17 and adds the additional limitation of the error being caused by a "disagreement" between the text caption and what was stated in the voice signal. Any text caption or transcription that contains errors is in disagreement to what

was stated in the captioned or transcribed voice signal. Thus any reference that discloses errors in a transcription necessarily meets this limitation. Therefore the Bridge Video Publication discloses each element of Claim 18.

Claim 29 of the '801 Patent is an independent claim. This method claim is practically the same as independent Claim 25, but adds the following limitations: replacing the first block of text with the corrected block of text and displaying the corrected block of text occur at least substantially simultaneously. The Bridge Video Publication discloses that an error correction may be done either manually or automatically. Correcting the first block of text generates a corrected block of text. This corrected block of text is displayed on the court reporter's electronic device. Upon making the corrections, in "real-time" the program immediately transmits the corrected block of text causing the corrected block of text to replace the first block of text. Thus, the Bridge Video Publication discloses that replacing the first block of text with the corrected block of text and displaying the corrected block of on the electronic device occur almost simultaneously. Therefore, the Bridge Video Publication discloses each element of Claim 29.

In conclusion, it is my opinion that the Bridge Video Publication discloses each and every element present in at least Claims 1-18 and 29 of the '801 Patent and therefore renders these claims invalid. In the alternative, as discussed below, the Bridge Video Publication renders these patent claims obvious.

b. INVALIDITY CHART.

Below is a chart of how the Bridge Video Publication (UTI00002049-51; UTI00002052-71) discloses the various claim elements, and therefore anticipates, at least Claims 1-18 and 29 of the

'801 Patent. Again, I have interpreted the claim elements by giving them their ordinary meaning, unless specifically stated otherwise.

Claim of the '801 Patent	Bridge Video Publication
1. A method of providing error correction in a text caption, the method comprising:	The Bridge Video Publication discloses a method of providing error correction of a real-time transcription. (UTI00002052-2060). The Bridge Video Publication discloses the "Bridge/Law Bridge Auto-Refresh protocol" that facilitates real-time display of a reporter's screen with the screen of one or more client computers. (UTI00002054-2059). The Bridge Video Publication states that "whenever corrections or changes or Real Time editing was performed on the reporter's screen, the client's screens were automatically refreshed." (UTI00002055-2059).
displaying a text caption on at least one electronic device, the text caption including one or more blocks of text representing a text transcription of a voice signal;	The Bridge Video Publication discloses displaying a text caption on a court reporter/transcriptionist's computer screen (<i>i.e.</i> , the top window entitled "Automatic Realtime Document Refresh") and on a client's computer screen (<i>i.e.</i> , the bottom window entitled "Bridge"), the text caption including one or more blocks of text (<i>e.g.</i> , "Welcome to the Bridge pro..." displayed on the client's screen) that can represent a text transcription of a voice signal heard by the transcriptionist (<i>see, e.g.</i> , the example question and answer illustrated). (UTI00002057-2059).
replacing a first block of text of the text caption with another block of text during a real-time conversation from which the voice signal is generated; and	The Bridge Video Publication discloses replacing a first block of text (<i>e.g.</i> , "Welcome to the Bridge pro..." shown on the client's screen in UTI00002055-2058) with another block of text (<i>e.g.</i> , the all-caps text block "WELCOME TO THE BRIDGE PROGRAM" shown on the reporter's screen in UTI00002058) during a real-time conversation from which the voice signal is generated. (<i>See, e.g.</i> , UTI00002054-2058).
displaying another block of text within the text caption on the at least one electronic device at a location of the first block of text within the text caption.	The Bridge Video Publication discloses displaying the another block of text (<i>i.e.</i> , the all-caps text block "WELCOME TO THE BRIDGE PROGRAM") on both the reporter's screen (<i>see</i> UTI00002058-2059) and on the client's screen (<i>see</i> UTI00002059) at a location of the block of text within the transcription (<i>i.e.</i> , the replacement, all-caps block of text on the client's screen is located where the original block of text was located).

Claim of the '801 Patent	Bridge Video Publication
<p>2. The method of claim 1, further comprising identifying one or more errors within the first block of text of the text caption with respect to what was said in the voice signal prior to generating the another block of text.</p>	<p>The Bridge Video Publication discloses that a reporter/transcriptionist views the transcribed blocks of text on the reporter's screen to identify a transcription error prior to generating the another block of text. (UTI00002054-2059 ("1998, Bridge/Law Bridge Auto-Refresh to take the rough out of Rough Draft"))).</p>
<p>3. The method of claim 1, further comprising generating the another block of text with a first device and</p>	<p>The Bridge Video Publication discloses generating the another block of text (<i>i.e.</i>, "WELCOME TO THE BRIDGE PROGRAM") with a first device (<i>i.e.</i>, the reporter's computer). (UTI00002055-2058).</p>
<p>transmitting the another block of text to the at least one electronic device.</p>	<p>The Bridge Video Publication discloses transmitting (via the "Bridge Auto-Refresh protocol") the another block of text to the at least one electronic device (<i>i.e.</i>, the client's screen). (UTI00002059).</p>
<p>4. The method of claim 3, wherein generating another block of text comprises: identifying one or more errors within the first block of text of the text caption; and</p>	<p>The Bridge Video Publication discloses that a reporter/transcriptionist views the transcribed blocks of text on the reporter's screen to identify a transcription error within the blocks of text. (UTI00002054-2059 ("1998, Bridge/Law Bridge Auto-Refresh to take the rough out of Rough Draft"))).</p>
<p>generating the another block of text including the first block of text of the text caption having each of the one or more errors replaced with corrected text within the text caption.</p>	<p>The Bridge Video Publication discloses generating the another block of text (<i>i.e.</i>, "WELCOME TO THE BRIDGE PROGRAM") that completely replaces the first block of text (<i>i.e.</i>, "Welcome to the Bridge pro...") and the identified errors therein. (UTI00002059).</p>
<p>5. The method of claim 4, wherein displaying the another block of text further comprises tagging the corrected text within the text caption.</p>	<p>The Bridge Video Publication discloses tagging the corrected text within the text caption. (<i>See</i> UTI00002049-51; UTI00002055-59).</p>
<p>6. The method claim 5, wherein tagging the corrected text comprises highlighting the corrected text within the text caption.</p>	<p>The Bridge Video Publication discloses highlighting the corrected text within the text caption. (<i>See</i> UTI00002049-51; UTI00002055-59).</p>
<p>7. The method of claim 1, wherein the first block of text</p>	<p>The Bridge Video Publication discloses the first block of text (<i>i.e.</i>, "Welcome to the Bridge pro...") of the</p>

Claim of the '801 Patent	Bridge Video Publication
of the text caption includes one or more errors, and	transcription including errors (<i>e.g.</i> , upper/lower case errors). (UTI00002059).
wherein the another block of text includes corrected words.	The Bridge Video Publication discloses the another block of text (<i>i.e.</i> , "WELCOME TO THE BRIDGE PROGRAM") includes corrected words (<i>e.g.</i> , capitalization). (UTI00002059).
8. The method of claim 1, further comprising generating the text caption on a first device and	The Bridge Video Publication discloses the reporter/transcriptionist generating the text transcription on the reporter's computer (<i>i.e.</i> , a first device). (UTI00002055-2058).
transmitting the text caption to the at least one electronic device.	The Bridge Video Publication discloses transmitting (via the "Bridge Auto-Refresh protocol") the text transcription to the at least one electronic device (<i>i.e.</i> , the client's screen). (UTI00002059).
9. A communication system, comprising:	The Bridge Video Publication discloses a communication system that provides real-time communication of a transcription between a reporter's computer screen and the computer screen of one or more clients. (UTI00002052-2060).
a communication device including a processor; a computer-readable medium coupled to the processor; a display coupled to the processor; and at least one application program stored in the computer-readable medium,	The Bridge Video Publication discloses a reporter's computer (<i>i.e.</i> , a communication device) and a client's computer screen (<i>i.e.</i> , the bottom window entitled "Bridge") that inherently includes a processor, a computer-readable medium coupled to the processor, a display coupled to the processor, and at least one application program (<i>e.g.</i> , a program implementing the Bridge Auto-Refresh protocol) stored in the computer-readable medium. Specifically, these particular elements are necessarily present in the reporter's computer and/or the client's computer described in the Bridge Video Publication, and it would be so recognized by persons of ordinary skill because, at a minimum, the basic components of a computer (and the familiar "windows" illustrated in the Bridge Video Publication) unambiguously disclose that the Bridge Video Publication incorporates a computer as a component of the communication system.
wherein the at least one application program, when executed by the processor, is configured to: display a text caption including one or more blocks of text on the display, the text caption indicating a text transcription of a voice	The Bridge Video Publication states that "whenever corrections or changes or real-time editing was performed on the reporter's screen, the client's screens were automatically refreshed." (UTI00002055-2059). The Bridge Program discloses that a text caption including one or more blocks of text (<i>e.g.</i> , "Welcome to the Bridge pro..." displayed on the client's screen) is displayed on a reporter's computer screen (<i>i.e.</i> , the top window entitled "Automatic Realtime Document

Claim of the '801 Patent	Bridge Video Publication
signal received by the communication device; and	Refresh”) and on a client’s computer screen (<i>i.e.</i> , the bottom window entitled “Bridge”), the text caption that can represent a text transcription of a voice signal heard by the transcriptionist, input to the reporter’s computer, and received by the client’s computer (<i>see, e.g.</i> , the example question and answer illustrated). (UTI00002057-2059).
display another block of text within the text caption on the display at a location that corresponds to an actual location as produced by the voice signal.	The Bridge Video Publication discloses displaying the another block of text (<i>i.e.</i> , the all-caps text block “WELCOME TO THE BRIDGE PROGRAM”) on both the reporter’s screen (<i>see</i> UTI00002058-2059) and on the client’s screen (<i>see</i> UTI00002059) at an actual location of the block of text within the transcription (<i>e.g.</i> , the replacement, all-caps block of text on the client’s screen is located where the original block of text was actually located).
10. The communication system of claim 9, wherein the at least one application program is further configured to tag at least one word of the another block of text within the text caption as a corrected word.	The Bridge Video Publication discloses tagging at least one word of the another block of text within the text caption as a corrected word. (<i>See</i> UTI00002049-51; UTI00002055-59).
11. The communication system of claim 9, wherein the at least one application program is further configured to display at least one word within the text caption having the one or more blocks of text of the text caption replaced by the another block of text as highlighted.	The Bridge Video Publication discloses highlighting at least one word within the text caption having the one or more blocks of text of the text caption that was replaced by the another block of text. (<i>See</i> UTI00002049-51; UTI00002055-59).
12. The communication of claim 9, wherein a highlighted word is indicative of a corrected word.	The Bridge Video Publication discloses highlighting the corrected words. (<i>See</i> UTI00002049-51; UTI00002055-59).
13. The communication system of claim 9, wherein the at least one application program is further configured to replace at least one block of text of the text caption with	The Bridge Video Publication discloses replacing a block of text (<i>e.g.</i> , “Welcome to the Bridge pro...” shown on the client’s screen in UTI00002055-2058 with another block of text (<i>e.g.</i> , the all-caps text block “WELCOME TO THE BRIDGE PROGRAM” shown on the client’s screen in UTI00002059) displayed on the client’s screen substantially

Claim of the '801 Patent	Bridge Video Publication
the another block of text and display the text caption on the display of the communication device substantially simultaneously.	simultaneously as the another block of text is generated by the reporter. (<i>See, e.g.</i> , UTI00002054-2059).
14. A computer-readable media storage medium storing instructions that when executed by a processor cause the processor to perform a method for providing error correction in a text caption, the method comprising:	The Bridge Video Publication discloses a reporter's computer (<i>i.e.</i> , a communication device) and a client's computer (<i>i.e.</i> , the bottom window entitled "Bridge" representing the client's screen) that inherently include a computer-readable medium having stored thereon the Bridge 2.0 software.
displaying a text caption representing a text transcription of a voice signal transmitted between a first device and a second device, the text caption including at least one block of text; and	The Bridge Video Publication discloses displaying a text caption on a court reporter/transcriptionist's computer screen (<i>i.e.</i> , the top window entitled "Automatic Realtime Document Refresh") and on a client's computer screen (<i>i.e.</i> , the bottom window entitled "Bridge"), the text caption including one or more blocks of text (<i>e.g.</i> , "Welcome to the Bridge pro..." displayed on the client's screen) that represent a text transcription of a voice signal heard by the transcriptionist (<i>see, e.g.</i> , the example question and answer illustrated). (UTI00002057-2059). The text caption is transmitted from the court reporter's device (<i>i.e.</i> , the "first device") to the client's device (<i>i.e.</i> , the "second device").
displaying another block of text within the text caption on at least one of the first device and the second device by replacing the at least one block of text by the another block of text at a location of the at least one block of text within the text caption.	The Bridge Video Publication discloses displaying the another block of text (<i>i.e.</i> , the all-caps text block "WELCOME TO THE BRIDGE PROGRAM") on both the reporter's screen (<i>see</i> UTI00002058-2059) and on the client's screen (<i>see</i> UTI00002059). The another block of text replaces an original block of text (<i>i.e.</i> , the non-capitalized text block "Welcome to the Bridge program") at the location where the original block of text appeared within the transcription (<i>i.e.</i> , the replacement, all-caps block of text on the client's screen is located where the original block of text was located). (<i>Compare</i> UTI00002058 <i>with</i> UTI00002059).
15. The computer-readable media storage medium of claim 14, wherein displaying the another block of text within the text caption includes identifying at least	The Bridge Video Publication discloses displaying the another block of text and identifying at least one word in the another block of text with a tag. (<i>See</i> UTI00002049-51; UTI00002055-59).

Claim of the '801 Patent	Bridge Video Publication
one word within the another block of text with a tag.	
16. The computer-readable media storage medium of claim 15, wherein identifying at least one word within the another block of text with a tag comprises highlighting the at least one word.	The Bridge Video Publication discloses using highlighting to tag at least one word in the another block of text. (<i>See</i> UTI00002049-51; UTI00002055-59).
17. A method, comprising:	The Bridge Video Publication discloses a method of providing error correction of a real-time transcription. (UTI00002052-60).
generating a text caption as a text transcription of a voice signal;	The Bridge Video Publication discloses that a court reporter listening to a verbal conversation (which one skilled in the art would understand could be audibly or via microphone) transcribes the conversation to generate a text caption. (<i>See, e.g.,</i> UTI00002055).
transmitting the text caption to a communication device;	The Bridge Video Publication discloses that the court reporter's device transmits the text caption to a client device (<i>i.e.,</i> a communication device) in real time. On page 4 of the Bridge Video Publication, a text caption is displayed on a court reporter/transcriptionist's computer screen (<i>i.e.,</i> the top window entitled "Automatic Realtime Document Refresh") and is transmitted in real time to a client's computer screen (<i>i.e.,</i> the bottom window entitled "Bridge"). (<i>See, e.g.,</i> UTI00002055). According to the Bridge Video Publication, this transmission may be accomplished via the "Bridge Auto-Refresh protocol," over "typical real-time cables, or networks, or wirelessly." (UTI00002066).
identifying an error in a block of text within the text caption; and	The Bridge Video Publication discloses displaying a text caption on a court reporter/transcriptionist's computer screen (<i>i.e.,</i> the top window entitled "Automatic Realtime Document Refresh"), which the court reporter can review in real time while making transcriptions. This allows the court reporter to identify errors and make "corrections" to the transcription. (UTI00002054-59).
transmitting a corrected block of text to the communication device as an inline correction for the text caption to replace the block of text within the text caption with the corrected	The Bridge Video Publication discloses the "Bridge/Law Bridge Auto-Refresh protocol" that allows real-time display of a reporter's screen on a client's screen. (UTI00002054-59). The Bridge Video Publication states that "whenever corrections or changes or Real Time editing was performed on the reporter's screen, the client's screens were automatically

Claim of the '801 Patent	Bridge Video Publication
block of text at a proper location as produced in the voice signal during communication between at least two parties.	refreshed.” (UTI0002055-2059). As an example, the Bridge Video Publication discloses the court reporter correcting the non- capitalized text block “Welcome to the Bridge program” to be in all-caps, and transmitting the corrected block of text via the Auto-Refresh protocol to the client’s device, such that the all-caps text block “WELCOME TO THE BRIDGE PROGRAM” appears on both the reporter’s screen (<i>see</i> UTI0002058-2059) and on the client’s screen (<i>see</i> UTI0002059) in the place of the original, non-capitalized text block. (<i>Compare</i> UTI0002058 with UTI0002059).
18. The method of claim 17, wherein the error is a disagreement between the text caption and what was stated in the voice signal.	The Bridge Video Publication discloses that the court reporter can make “corrections” and “changes” to the transcription in real time, and refers to the court reporter’s edits as “tak[ing] the rough out of rough draft.” (UTI0002054-59). Inherently the “corrections” (versus any other “change” or “edit”) a transcriptionist makes to a transcription he or she is generating are due to a disagreement between the transcription and the words used in the monitored conversation. (UTI0002054-59).
29. A method, comprising:	The Bridge Video Publication discloses a method of providing error correction of a real-time transcription. (UTI00002049-51; UTI00002052-60).
displaying a text caption on a communication device, the text caption corresponding to a text transcription of at least a portion of a voice signal of a conversation between at least two parties;	The Bridge Video Publication discloses real-time transcription of a communication between at least two parties. (<i>See</i> UTI00002049-51).
replacing at least one block of text of the text caption with a corrected block of text;	The Bridge Video Publication discloses the “Bridge/Law Bridge Auto-Refresh protocol” that allows real-time display of a reporter’s screen on a client’s screen. (UTI0002054-59). The Bridge Video Publication states that “whenever corrections or changes or Real Time editing was performed on the reporter’s screen, the client’s screens were automatically refreshed.” (UTI0002055-59). As an example, the Bridge Video Publication discloses the court reporter correcting the non- capitalized text block “Welcome to the Bridge program” to be in all-caps. (<i>Id.</i>).
displaying the corrected block of text within the text caption as an inline correction during the conversation, such that the	The Bridge Video Publication discloses displaying the corrected block of text in the proper location with respect to the original voice signal. (<i>See</i> UTI00002049-50; UTI00002055-59). The Bridge Video Publication states that

Claim of the '801 Patent	Bridge Video Publication
corrected block of text appears within the text caption in a proper location as produced in the voice signal, wherein replacing at least one block of text with a corrected block of text and displaying the corrected block of text within the text caption occur at least substantially simultaneously; and	“whenever corrections or changes or Real Time editing was performed on the reporter’s screen, the client’s screens were automatically refreshed.” (UTI0002055-59). As an example, the Bridge Video Publication discloses the court reporter correcting the non- capitalized text block “Welcome to the Bridge program” to be in all-caps, and transmitting the corrected block of text via the Auto-Refresh protocol to the client’s device, such that the all-caps text block “WELCOME TO THE BRIDGE PROGRAM” appears on both the reporter’s screen (<i>see</i> UTI0002058-59) and on the client’s screen (<i>see</i> UTI0002059) in the place of the original, non-capitalized text block, at substantially the same time as the correction is made. (<i>Compare</i> UTI0002058 with UTI0002059).
indicating that the corrected block of text replaced the block of text.	The Bridge Video Publication discloses indicating where the corrected block of text has replaced the block of text. (<i>See</i> UTI00002049-51; UTI00002055-59).

The Bridge Video Publication was publically accessible online as early as January 2, 2008, *i.e.*, more than one year before the effective filing date of the '801 Patent and prior to the alleged invention date. (*See, e.g.*, UTI00002115-19 at ¶¶ 4-8; UTI00002120-25).

3. UNITES STATES PATENT NO. 6,567,503 TO ENGELKE (“ENGELKE 1”) ANTICIPATES CLAIMS 1, 2, 7, 9, AND 13 OF THE '801 PATENT.

a. OVERVIEW.

Based on my review of Engelke 1 and the '801 Patent, it is my opinion that Engelke 1 anticipates at least Claims 1, 2, 7, 9 and 13 of the '801 Patent. Claims 1 and 9 of the '801 Patent are independent claims. Again, the only difference between these independent claims is that Claim 1 is a method claim and Claim 9 describes a computer hardware configuration that performs the exact method as described in Claim 1. Therefore, my analysis of Claim 1 is the same as Claim 9.

Claim 1 of the '801 Patent is a method claim. The patent first describes the step of displaying a block of captioned text on at least one electronic device. The second step describes replacing the first block of text captions with another block of text captions during a real-time conversation. The third and final step displays the replaced block of text on the same electronic device (the at least one electronic device) that displayed the first block of text.

As illustrated in more detail in the claim chart of section II(A)(3)(b) below, Engelke 1 discloses all of the elements of Claims 1 and 9 of the '801 Patent. Engelke 1 discloses a TRS system that displays a transcribed block of captioned text on the call assistant's computer (the at least one electronic device). Engelke 1 further discloses having a call assistant identify a mistake, correct that mistake, then replace the first block of captioned text with the corrected block of captioned text. Finally, the replaced block of corrected captioned text is displayed on the call assistant's computer display (the at least one electronic device). Therefore, Engelke 1 discloses each element of Claims 1 and 9.

Claim 2 of the '801 Patent is dependent on Claim 1 and adds the additional limitation of identifying errors within a text caption with respect to what was said prior to generating the another block of text. As mentioned above, Engelke 1 discloses identifying an error in the text caption and then replacing the error with the correct text. Therefore, Engelke 1 discloses each element of Claim 2 and further discloses replacing the errors with the correct text.

Claim 7 of the '801 Patent refers to Claim 1 and adds the additional limitation that the first block of text caption includes an error and the another block of text includes corrected words. For the same reason discussed in Claim 2 above, Engelke 1 discloses errors being present and identified and corrected by the call assistant. Therefore, Engelke 1 discloses each element of Claim 7.

Claim 13 is dependent on Claim 9, but adds the limitation requiring the at least one application program to be further configured to replace at least one block of text with another block of text and display the text caption on the display of the communication device substantially simultaneously. Engelke 1 discloses that the corrected block of text is displayed almost simultaneously, as shown in the chart below.

In conclusion, it is my opinion that Engelke 1 discloses each and every element present in Claims 1, 2, 7, 9 and 13 of the '801 Patent and therefore renders these claims invalid. In the alternative, as discussed below, Engelke 1 renders these claims obvious.

b. INVALIDITY CHART.

Below is a chart of how Engelke 1 (UTI00002072-82) anticipates at least Claims 1, 2, 7, 9 and 13 of the '801 Patent. I have interpreted the claim elements by giving them their ordinary meaning, unless specifically stated otherwise.

Claim of the '801 Patent	Engelke 1 Reference
1. A method of providing error correction in a text caption, the method comprising:	Engelke 1 discloses an editing system for real-time remote transcription in which words can be identified and corrected. (UTI00002072 at Abstract).
displaying a text caption on at least one electronic device, the text caption including one or more blocks of text representing a text transcription of a voice signal;	Engelke 1 discloses that the voice signal 16 of a hearing user 12 is provided to a relay computer and converted to a text caption that is presented on a display 48 (<i>see, e.g.</i> , UTI00002073-2074 at FIGS. 1 and 3) to a call assistant 40 as a text transcription (<i>see, e.g.</i> , UTI00002079-2080 at 3:38-46; 5:39-56).
replacing a first block of text of the text caption with another block of text during a real-time conversation from which the voice signal is generated; and	Engelke 1 discloses that when the call assistant 40 at the relay identifies an error in the text caption on display 48 (<i>see, e.g.</i> , UTI00002074 at FIG. 3), the call assistant 40 selects the text error (<i>e.g.</i> , via touch) and replaces the text error by revoicing corrected text or typing corrected text. (<i>See, e.g.</i> , UTI00002080 at 6:13-34).
displaying another block of text within the text caption on the at least one electronic device at a location of the first	Engelke 1 discloses that when the text within the text caption is replaced by the call assistant 40, the corrected text is displayed on the call assistant's interface in the location of the text that was replaced. (UTI00002080 at 6:26-34).

Claim of the '801 Patent	Engelke 1 Reference
block of text within the text caption.	
2. The method of claim 1, further comprising identifying one or more errors within the first block of text of the text caption with respect to what was said in the voice signal prior to generating the another block of text.	Engelke 1 discloses that a voice signal 16 from a hearing user 12 is played to a call assistant 40 via a headset 38 and the call assistant 40 revoices the voice signal 16 to a speech recognition program 70 to generate the text caption. (UTI00002073 at FIG. 1 and UTI00002079 at 3:34-46). The call assistant 40 first identifies an error in the text caption on display 48 (<i>see, e.g.</i> , UTI00002074 at FIG. 3), the call assistant selects the text error (<i>e.g.</i> , via touch), and then replaces the text error by revoicing corrected text or typing corrected text. (<i>See, e.g.</i> , UTI00002080 at 6:13-34). The corrected text is a correction to the text caption and therefore is a correction with respect to what was said in the voice signal prior to generating the correction text.
7. The method of claim 1, wherein the first block of text of the text caption includes one or more errors, and	Engelke 1 discloses that a word in the text transcription may include an error. (UTI00002080 at 6:13-34).
wherein the another block of text includes corrected words.	Engelke 1 discloses that the error in the text can be replaced by touching the text on a touch screen and revoicing or typing a corrected word to replace the text including the error. (UTI00002080 at 6:13-34).
9. A communication system, comprising:	Engelke 1 discloses a system to enable communication between a hearing user 12 and a hard-of-hearing user 14. (<i>See, e.g.</i> , UTI00002079-2079 at 2:66-3:13).
a communication device including a processor; a computer-readable medium coupled to the processor; a display coupled to the processor; and at least one application program stored in the computer-readable medium,	Engelke 1 discloses a relay 10 including a computer 18 having a processor 44, 56 joined on a bus 58 with memory 60, and a display 48 coupled to the processor 44, 56. (UTI00002079 at 3:40-45; 4:1-4; and UTI00002073-2074 FIGS. 1 and 4). The processor 56 runs programs 70, 78 stored in memory 60. (UTI00002079 at 4:12-41).
wherein the at least one application program, when executed by the processor, is configured to: display a text caption including one or more blocks of text on the display, the text caption indicating a	Engelke 1 discloses that the executed program 70, 78 of the computer 18 receives the voice of the hearing user 12 and converts the voice signal 16 to a text caption that is presented on the display 48 to a call assistant 40 as a text transcription arranged into lines 114. (UTI00002079-2080 at 3:34-46 and 5:43-56).

Claim of the '801 Patent	Engelke 1 Reference
text transcription of a voice signal received by the communication device; and	
display another block of text within the text caption on the display at a location that corresponds to an actual location as produced by the voice signal.	Engelke 1 discloses that when the call assistant 40 at the relay identifies an error in the text caption on display 48 (<i>see, e.g.,</i> UTI00002074 at FIG. 3), the call assistant 40 selects the text error (<i>e.g.,</i> via touch) and replaces the text error by revoicing corrected text or typing corrected text. (<i>See, e.g.,</i> UTI00002080 at 6:13-34). When the text is replaced by the call assistant 40, the corrected text is displayed on the call assistant's display 48 in the location of the text that was replaced. (UTI00002074 at FIG. 3 and UTI00002080 at 6:26-34).
13. The communication system of claim 9, wherein the at least one application program is further configured to replace at least one block of the text caption with the another block of text and display the text caption on the display of the communication device substantially simultaneously.	Engelke 1 discloses that when the call assistant 40 at the relay identifies an error in the text caption on display 48 (<i>see, e.g.,</i> UTI00002074 at FIG. 3), the call assistant 40 selects the text error (<i>e.g.,</i> via touch) and replaces the text error by revoicing corrected text or typing corrected text. (<i>See, e.g.,</i> UTI00002080 at 6:13-34). When the text within the text caption is replaced by the call assistant 40, the corrected text is simultaneously displayed on the call assistant's interface in the location of the text that was replaced. (UTI00002080 at 6:26-34).

4. UNITED STATES. PATENT NO. 5,809,112 TO RYAN ("RYAN") ANTICIPATES CLAIMS 1, 2, 7, 9-13, 25, 26, 28, AND 29 OF THE '801 PATENT.

a. OVERVIEW.

Based on my review of the Ryan reference and the '801 Patent, it is my opinion that the Ryan reference anticipates Claims 1, 2, 9-13, 25, 26, 28, and 29 of the '801 Patent. Claims 1, 9, 25 and 29 of the '801 Patent are independent claims.

Claim 1 of the '801 Patent is a method claim and Claim 9 of the '801 Patent is a system claim. Again, the only difference between these two independent claims is that Claim 1 is a method claim and Claim 9 describes a computer hardware configuration that performs the exact

method as described in Claim 1. Therefore, my analysis of Claim 1 is the same as Claim 9. The patent first describes the step of displaying a block of captioned text on at least one electronic device. The second step describes replacing the first block of text captions with another block of text captions during a real-time conversation. The third and final step displays the replaced block of text on the same electronic device (the at least one electronic device) that displayed the first block of text.

As illustrated in more detail in the claim chart of section II(A)(4)(b) below, Ryan discloses all of the elements of Claims 1 and 9 of the '801 Patent. Ryan discloses a relay interface that allows a relay agent to caption a voice signal using a keyboard. This text caption is displayed on the relay agent's electronic device (the at least one electronic device) and may be manually edited by the relay agent or automatically edited by an error correction program. Correcting the first block of text generates a corrected block of text. This corrected block of text is moved into a buffer, but also displayed on a relay agent's electronic device. The relay agent transmits the corrected block of text causing the corrected block of text to replace the first block of text. Ryan discloses that the replacement of the first block of text with the corrected block of text and displaying the corrected block of on the relay agent's electronic device occurs almost simultaneously. Therefore, Ryan discloses each element of Claims 1 and 9.

Claim 2 of the '801 Patent is dependent on Claim 1 and adds the additional limitation of identifying errors within a text caption with respect to what was said in the voice signal prior to generating the another block of text. As mentioned above, Ryan discloses identifying an error in a text caption and then either manually or automatically replacing the error with the correct text. Therefore, Ryan discloses each element of Claim 2 and further discloses replacing the errors with the correct text.

Claim 7 of the '801 Patent depends on Claim 1 and adds the limitation that requires that the first block of text of the text caption includes one or more errors, and wherein the another block of text includes corrected words. Ryan discloses correcting a first block of text that contains errors by replacing that text with the corrected words. Therefore, Ryan discloses every element of Claim 7.

Claim 10 of the '801 Patent is dependent on Claim 9 and adds the additional limitation of tagging the corrected text caption. Ryan discloses that when a correction is made, the corrected text is placed immediately into a buffer. The relay software program monitors the buffer and will correct any additionally misspelled words automatically displaying these corrected words in another color (one method to tag corrected text). Therefore, Ryan discloses each element of Claim 10.

Claim 11 of the '801 Patent is dependent on Claim 9 and adds the additional limitation of displaying the corrected block of text that has replaced the first uncorrected block of text. Ryan discloses replacing the first block of text with the corrected block of text that is generated during a real-time conversation. The corrected block of text is then displayed on the relay agent's electronic device. Therefore, Ryan discloses each element of Claim 11.

Claim 12 of the '801 Patent is dependent on Claim 9 and adds the additional limitation of the highlighted word being indicative of the corrected word. Ryan discloses that when a correction is made in the buffer before transmitting to the hard-of-hearing user, the corrected text may be displayed in another color (one method to tag corrected text). This highlighting is indicative of the corrected word. Therefore, Ryan discloses all of the elements in Claim 12.

Claim 13 of the '801 Patent is dependent on Claim 9 and adds the additional limitation of having an application program replace the first block of text caption with a second block of text

caption and displaying the second block of text caption on a display of a communication device almost simultaneously with replacing the first block of text caption. Ryan discloses that an error correction may be done either manually or automatically. Correcting the first block of text generates a corrected block of text. This corrected block of text is moved into a buffer, but also displayed on a relay agent's electronic device. The relay agent transmits the corrected block of text causing the corrected block of text to replace the first block of text. Ryan discloses that the replacement of the first block of text with the corrected block of text and displaying the corrected block on the relay agent's electronic device occurs almost simultaneously. Therefore, Ryan discloses each element of Claim 13.

Claim 25 of the '801 Patent is an independent claim. This method claim includes the following elements: (1) displaying a first text caption on a communication device where the text caption is created by transcribing a conversation between two parties; (2) receiving a corrected block of text within the text caption; (3) displaying the corrected block of text as an in-line correction within the text caption; and (4) indicating (tagging) that the corrected block of text replaced the first block of text. Ryan discloses a relay interface that allows a relay agent to caption a voice signal using a keyboard. This text caption is displayed on the relay agent's computer monitor (communication device) and may be manually edited by the relay agent or automatically edited by an error correction program. Correcting the first block of text generates a corrected block of text. This corrected block of text is moved into a buffer, but also displayed on a relay agent's electronic device. The relay software program monitors the buffer and will correct any additionally misspelled words automatically displaying these corrected words in another color (one method to tag corrected text). The relay agent then transmits the corrected

block of text causing the corrected block of text to replace the first block of text and displaying the in-line correction. Therefore, Ryan discloses each element of Claim 25.

Claim 26 of the '801 Patent is dependent on Claim 25 and adds the additional limitation of indicating that a corrected block of text replaced the first block of text by highlighting the corrected block of text. Ryan discloses that when a correction is made in the buffer before transmitting to the hard-of-hearing user, that the corrected text may be displayed in another color (one method to tag corrected text). This highlights the corrected block of text. Therefore, Ryan discloses each element of Claim 26.

Claim 28 of the '801 Patent is dependent on Claim 25 and adds the additional limitation of selecting a corrected block of text from a group consisting of at least one word, and at least one line of text. Ryan discloses that a relay agent may select a word or line of text to correct. The corrected text replaces the uncorrected text. Therefore, Ryan discloses each element of Claim 28.

Claim 29 of the '801 Patent is an independent claim. This method claim includes the is the practically the same as independent Claim 25, but adds the following limitations: replacing the first block of text with the corrected block of text and displaying the corrected block of text occurs at least substantially simultaneously. Ryan discloses that an error correction may be done either manually or automatically. Correcting the first block of text generates a corrected block of text. This corrected block of text is moved into a buffer, but also displayed on a relay agent's electronic device. The relay agent then transmits the corrected block of text causing the corrected block of text to replace the first block of text. Ryan discloses that the replacement of the first block of text with the corrected block of text and displaying the corrected block of on the

relay agent's electronic device occurs almost simultaneously. Therefore, Ryan discloses each element of Claim 29.

Accordingly, it is my opinion that Ryan anticipates Claims 1, 2, 7, 9-13, 25, 26, 28 and 29 of the '801 Patent. In the alternative, as discussed below, Ryan renders these claims obvious.

b. INVALIDITY CHART.

Below is a chart of how Ryan (UTI00002083-90) anticipates at least Claims 1, 2, 7, 9-13, 25, 26, 28, and 29 of the '801 Patent. I have interpreted the claim elements by giving them their ordinary meaning, unless specifically stated otherwise.

Claim of the '801 Patent	Ryan Reference
1. A method of providing error correction in a text caption, the method comprising:	Ryan discloses a transcription system including a method for correcting errors in a text caption. (<i>See, e.g.</i> , UTI00002083 at Abstract).
displaying a text caption on at least one electronic device, the text caption including one or more blocks of text representing a text transcription of a voice signal;	Ryan discloses a relay interface 10 including a monitor 24 and a keyboard 26. (UTI00002084 at FIG. 1, and UTI00002087 at 3:46-47, and 4:15-18). A relay agent using interface 10 receives a voice signal from a person using phone 14 via agent device 20 and types a text caption corresponding to the voice signal on keyboard 26. (UTI00002088 at 5:26-34). The text caption is displayed on display 24 and can be manually edited by the relay agent. (UTI00002088 at 5:36-57).
replacing a first block of text of the text caption with another block of text during a real-time conversation from which the voice signal is generated; and	Ryan discloses that after manual editing is complete, the text caption is moved into a transmit buffer where the text caption is still displayed; a program analyzes the text caption to automatically identify text errors and replace any recognized errors with corrected text. (UTI00002085 at FIG. 2 and UTI00002088 at 6:16-34). The replacing occurs during a real-time conversation from which the voice signal is generated. (<i>See, e.g.</i> , UTI00002088 at 6:56-67).
displaying another block of text within the text caption on the at least one electronic device at a location of the first block of text within the text caption.	Ryan discloses that when an erroneous word in the text caption is corrected, the corrected word replaces (<i>i.e.</i> , is substituted for) the erroneous word and is presented on the display 24 for the relay agent to view. (UTI00002088-2089 at 6:16-30 and 7:45-49). This replacement / substitution of the erroneous word for the corrected word results in the corrected word being displayed at the location of the erroneous word.

Claim of the '801 Patent	Ryan Reference
<p>2. The method of claim 1, further comprising identifying one or more errors within the first block of text of the text caption with respect to what was said in the voice signal prior to generating the another block of text.</p>	<p>Ryan discloses that the automated correction program identifies an error in the transcribed word prior to generating the corrected word that replaces the erroneous word. (UTI00002088 at 6:18-27). For example, Ryan discloses replacing a misspelled word with the correct spelling of the word, which represents what was said in the voice signal being transcribed by the relay agent. (UTI00002088 at 6:18-27).</p>
<p>7. The method of claim 1, wherein the first block of text of the text caption includes one or more errors, and wherein the another block of text includes corrected words.</p>	<p>Ryan discloses that wherein there is an error in the first block of text, that error will be corrected by generating a second block of text with the corrected words. Ryan discloses that when an erroneous word in the text caption is corrected, the corrected word replaces (<i>i.e.</i>, is substituted for) the erroneous word and is presented on the display 24 for the relay agent to view. (UTI00002088-2089 at 6:16-30 and 7:45-49). This replacement / substitution of the erroneous word for the corrected word results in the corrected word being displayed at the location of the erroneous word.</p>
<p>9. A communication system, comprising:</p>	<p>Ryan discloses a transcription system in which communication occurs between a phone user and a TDD user. (<i>See</i> UTI00002084 at Fig. 1).</p>
<p>a communication device including a processor; a computer-readable medium coupled to the processor; a display coupled to the processor; and at least one application program stored in the computer-readable medium,</p>	<p>Ryan discloses a relay interface 10 that includes a computer that can communicate with phone 14 and TDD 16. Ryan further teaches that the interface 10 includes both a database 28 and a display 24, and runs software. (UTI00002087 at 3:43-52 and 4:19-28).</p>
<p>wherein the at least one application program, when executed by the processor, is configured to: display a text caption including one or more blocks of text on the display, the text caption indicating a text transcription of a voice signal received by the communication device; and</p>	<p>Ryan discloses that the software program run by the computer causes the relay agent's terminal to display the text caption generated by the relay, including one or more words (including both the words in the edit text buffer and the words in the transmit text buffer) that were transcribed from the voice signal received by the relay. (UTI00002087-2088 at 4:24-28, 5:23-31, and 6:7-15 (displaying the text in the transmit text buffer via terminal monitor 24)).</p>

Claim of the '801 Patent	Ryan Reference
display another block of text within the text caption on the display at a location that corresponds to an actual location as produced by the voice signal.	Ryan discloses that the software allows the relay agent to make manual changes to the text displayed on the terminal monitor 24 while the text is still in the edit text buffer. (UTI00002088 at 5:36-44). Ryan also teaches that the software monitors text in the transmit text buffer and, when a misspelled word is identified, corrects the word. (UTI00002088 at 6:16-30). In both cases the corrected word is displayed at the location at which the erroneous word had appeared on the terminal monitor 24 in the transcription of the voice signal.
10. The communication system of claim 9, wherein the at least one application program is further configured to tag at least one word of the another block of text within the text caption as a corrected word.	Ryan also discloses that when the software monitors text in the transmit text buffer and corrects misspelled words, the corrected text can be displayed in a different color (<i>i.e.</i> , can be “tagged”) to indicate to the relay agent that a correction took place. (UTI00002088 at 6:16-30 (“The preferred embodiment indicates whether the word is a substituted word or a typed word by the particular color of the text displayed at the relay terminal monitor 24.”)).
11. The communication system of claim 9, wherein the at least one application program is further configured to display at least one word within the text caption having the one or more blocks of text of the text caption replaced by the another block of text as highlighted.	Ryan also discloses that when the software monitors text in the transmit text buffer and corrects misspelled words, the corrected text can be displayed in a different color (<i>i.e.</i> , “highlighting” the text via color to differentiate it from the rest of the text) to indicate to the relay agent that a correction took place. (UTI00002088 at 6:16-30 (“The preferred embodiment indicates whether the word is a substituted word or a typed word by the particular color of the text displayed at the relay terminal monitor 24.”)).
12. The communication system of claim 9, wherein a highlighted word is indicative of a corrected word.	Ryan also discloses that when the software monitors text in the transmit text buffer and corrects “misspelled” words, the corrected text can be displayed in a different color (<i>i.e.</i> , “highlighting” the text via color to differentiate it from the rest of the text) to indicate to the relay agent that a correction took place. (UTI00002088 at 6:16-30).

Claim of the '801 Patent	Ryan Reference
<p>13. The communication system of claim 9, wherein the at least one application program is further configured to replace at least one block of text of the text caption with the another block of text and display the text caption on the display of the communication device substantially simultaneously.</p>	<p>In the system disclosed in Ryan, when the software detects an error in the text displayed on the relay agent's monitor in the transmit text buffer, the text is corrected and the corrected text is displayed immediately on the display 24 to show the correction. (UTI00002088 at 6:19-29). In other words, the steps of replacing the erroneous text in the text caption and displaying the corrected text are simultaneous.</p>
<p>25. A method, comprising:</p>	<p>Ryan discloses a method for performing transcription and error correction. (UTI00002086 at 1:6-10).</p>
<p>displaying a text caption on a communication device, the text caption corresponding to a text transcription of at least a portion of a voice signal of a conversation between at least two parties;</p>	<p>Ryan discloses that, in one embodiment, a relay agent working at a relay 10 receives a voice signal from a person using a phone 14 via agent device 20 and transcribes a caption corresponding to the voice via keyboard 26, which is then displayed on the monitor 24 of the agent's terminal 12 (<i>i.e.</i>, communication device). (UTI00002087 at 4:19-24).</p>
<p>receiving a corrected block of text for at least one block of text within the text caption;</p>	<p>Ryan discloses that a software program monitors text entered by the relay agent and, when a misspelled word is identified, sends a corrected word to the transmit text buffer to replace the misspelled word. (UTI00002088-2089 at 6:16-30 and 7:39-54). Thus, the relay agent's terminal receives a received corrected block of text (correctly-typed word) from the software program.</p>
<p>displaying the corrected block of text within the text caption as an inline correction during the conversation, such that the corrected block of text appears within the text caption in place of the at least one block of text; and</p>	<p>Ryan discloses that, during the conversation, the relay agent can make manual changes to the text displayed on the terminal monitor 24 while the text is still in the edit text buffer. (UTI00002088 at 5:36-44). Ryan also teaches that the software monitors text in the transmit text buffer during the conversation and, when a misspelled word is identified, corrects the word. (UTI00002088 at 6:16-30). In both cases the corrected word is an "inline" correction in that it is displayed at the location at which the erroneous word had appeared on the terminal monitor 24 in the transcription of the voice signal.</p>

Claim of the '801 Patent	Ryan Reference
indicating that the corrected block of text replaced the at least one block of text.	Ryan also discloses that when the software monitors text in the transmit text buffer and corrects misspelled words, the corrected text can be displayed in a different color to indicate to the relay agent that a correction took place. (UTI00002088 at 6:16-30).
26. The method of claim 25, wherein indicating that the corrected block of text replaced the at least one block of text includes highlighting the corrected block of text within the text caption.	Ryan discloses that when the software monitors text in the transmit text buffer and corrects misspelled words, the corrected text can be displayed in a different color (<i>i.e.</i> , “highlighting” the text via color to differentiate it from the rest of the text) to indicate to the relay agent that a correction took place. (UTI00002088 at 6:16-30 (“The preferred embodiment indicates whether the word is a substituted word or a typed word by the particular color of the text displayed at the relay terminal monitor 24.”)).
28. The method of claim 25, wherein the corrected block of text is selected from the group consisting of at least one word, at least one sentence, and at least one line of text.	Ryan discloses that when an erroneous “word” in the text caption is corrected, the corrected “word” replaces (<i>i.e.</i> , is substituted for) the erroneous word and is presented on the display 24 for the relay agent to view. (UTI00002088-2089 at 6:16-30 and 7:45-49).
29. A method, comprising:	Ryan discloses a method for performing transcription and error correction. (UTI00002086 at 1:6-10).
displaying a text caption on a communication device, the text caption corresponding to a text transcription of at least a portion of a voice signal of a conversation between at least two parties;	Ryan discloses that, in one embodiment, a relay agent working at a relay 10 receives a voice signal from a person using a phone 14 via agent device 20 and transcribes a caption corresponding to the voice via keyboard 26, which is then displayed on the monitor 24 of the agent’s terminal 12 (<i>i.e.</i> , communication device). (UTI00002084 at FIG. 1 and UTI00002087 at 4:19-24).
replacing at least one block of text of the text caption with a corrected block of text;	Ryan discloses that after manual editing by the relay agent is complete, the text caption is moved into a transmit buffer where the text caption is still displayed; a program analyzes the text caption to automatically identify text errors and replace any recognized errors with corrected text. (UTI00002085 at FIG. 2 and UTI00002088 at 6:16-34).

Claim of the '801 Patent	Ryan Reference
displaying the corrected block of text within the text caption as an inline correction during the conversation, such that the corrected block of text appears within the text caption in a proper location as produced in the voice signal,	Ryan discloses that, during the conversation, the relay agent can make manual changes to the text displayed on the terminal monitor 24 while the text is still in the edit text buffer. (UTI00002088 at 5:36-44). Ryan also teaches that the software monitors text in the transmit text buffer during the conversation and, when a misspelled word is identified, corrects the word. (UTI00002088 at 6:16-30). In both cases the corrected word is an "inline" correction in that it is displayed at the location at which the erroneous word had appeared on the terminal monitor 24 in the transcription of the voice signal.
wherein replacing at least one block of text with a corrected block of text and displaying the corrected block of text within the text caption occur at least substantially simultaneously; and	Ryan further discloses that, when the software detects an error in the text displayed on the relay agent's monitor in the transmit text buffer, the text is corrected and the corrected text is displayed immediately on the display 24 to show the correction. (UTI00002088 at 6:19-29). In other words, the steps of replacing the erroneous text in the text caption and displaying the corrected text are simultaneous.
indicating that the corrected block of text replaced the block of text.	Ryan also discloses that when the software monitors text in the transmit text buffer and corrects misspelled words, the corrected text can be displayed in a different color to indicate to the relay agent that a correction took place. (UTI00002088 at 6:16-30).

B. THE ASSERTED CLAIMS OF THE '801 PATENT ARE OBVIOUS IN LIGHT OF THE PRIOR ART.

As discussed and shown in the charts above with respect to the Bridge Video Publication, Engelke 1 and Ryan references, those references disclose the various claim elements of the claims in the '801 Patent. The error correction display methods described therein are very close to each and every one of the claims in the '801 Patent, and there was nothing novel or non-obvious about the way the 801 Patent describes performing "in-line" error correction in "real-time" at the time of the purported invention in the '801 Patent. Accordingly, to the extent that the Court finds differences between the patent claims and references discussed above, then my opinions are that alternatively, those references render the patent claims obvious, in light of the

other prior art references discussed herein, and most importantly, in light of common sense and logic. The purported invention was, at most, a very small and obvious design choice or preference in error correction display methodology used in TRS services that, as shown above with respect to other types of verbatim voice transcription services, such as the real-time Bridge Court Reporting Publication, was already in use.

In addition, the remainder of the patent claims in the '801 Patent are obvious for similar reasons as discussed above. Nothing about any of the additional purported claim elements therein render any of the claims nonobvious in light of the prior art and they were all known elements in the art. One of ordinary skill in the art would have been motivated to combine the references discussed herein with the other references discussed herein to arrive at the error correcting display methods disclosed in the claims of the '801 Patent.

One reason a person of ordinary skill in the art would have been motivated to combine the references discussed herein to arrive at the purported inventions in the '801 Patent is that there are only a finite number of ways to position and display a corrected a word or phrase in a text stream. Some potential methods are (1) to correct the text before sending it to the recipient, or (2) to send the uncorrected text right away and then either (a) resend the entire text stream with the corrected text in it, (b) append the corrected word or phrase at the end of the paragraph or sentence, (c) place the corrected word on a new line, (d) insert the correction next to or near the incorrect word, (e) replace the incorrect word with the correct word, or (f) display the correct word or phrase adjacent to the text stream and use a comment or bubble, line or arrow, or other method to indicate the text to which the corrected word or phrase applies. Any person of ordinary skill in the art who thought about the problem in the 2008-09 timeframe for even a brief amount of time would have come up with this list and possibly a few others. In short, the way to

display and transmit a corrected word is not an expansive or complicated realm of possible options.

Based on the design incentives in the field, the limitations inherent at the time in captioned telephone service (known as “CTS”) and CTS equipment, and the goals and requirements for how CTS must be provided, a person of ordinary skill in the art would rule out several of these. For example, given the small screen size of most CTS devices in the 2008-2009 timeframe, it would waste space to place the correction in a new line or in a bubble or comment box. Also, CTS providers try to have a low latency--in other words, a small amount of time between when the hearing user says a word and when the text of that word appears on the phone. Because of this, it would be obvious to try sending uncorrected text right away, then sending and displaying corrections later if need be, so that the delay of a call assistant checking and correcting the text does not slow down the speed of text delivered to the user. This would have been recognized as a particularly good option if the call assistant's voice recognition profile has good accuracy (meaning there would inherently be fewer errors to begin with). In addition, the text captions scroll fairly rapidly over the screen of a CTS device in order to keep up with the conversation. If a CTS provider were to re-send an entire paragraph or chunk of the text caption that has the corrected word in it, that re-sent paragraph or chunk would have to scroll off the screen so fast to allow the new text to be displayed that it would be almost unreadable to a user. In addition, it would require the user to re-read text and try to figure out what the differences are, which is undesirable. Furthermore, placing the corrected word in the same place as the incorrect word may provide, for some users, better context. Accordingly, the ultimate choice in 2008-2009 would have been a matter of design choice rather than an "invention."

Moreover, it would have been obvious to a person of ordinary skill in the art at the time of the purported invention to look to fields other than CTS for something as simple as error correction. The manner of introducing an error correction is just a matter of how the CTS provider displays, i.e. positions, the correction, not necessarily an issue of implementing new technology or equipment or interfacing existing technology or equipment. For example, how you display an error correction in a CTS setting does not necessarily affect what equipment you are using or what communication protocol you are using. It's really more an issue of preference in terms of appearance, and some minor coding adjustments. For this reason, a person of ordinary skill in the art would not have believed they needed to review and/or study only references within the CTS or TRS field - there would be no real design or implementation impediment to adopting a concept on how to display corrections from another field in which text streams are transmitted to users and corrections take place.

In my career as a software engineer in the TRS field, I would not have hesitated at the time of the purported invention to look to fields like court reporting, instant messaging, TV closed captioning, or other related technologies for concepts or ideas for visual appearance of how text and corrections are displayed. I know that other engineers would (and routinely did) look to such fields for these kinds of ideas.

Although a person of ordinary skill in the art could have combined a number of different references, below is a sample of possible permutations of the relevant prior art references discussed herein that could have been combined by a person of ordinary skill in the art and that render the claims of the '801 Patent obvious. I reserve the right to refer to other or additional prior art for any particular combination described below, as further support for my opinions.

1. THE COMBINATION OF UNITED STATES PATENT NO. 7,881,441 TO ENGELKE ("ENGELKE 2") AND UNITED STATES PATENT NO. 7,428,702 TO CERVANTES ("CERVANTES") RENDERS CLAIMS 1-29 OF THE '801 PATENT OBVIOUS.

a. OVERVIEW.

Based on my review of Engelke 2, Cervantes, and the '801 Patent, it is my opinion that the Engelke 2 reference in combination with Cervantes renders Claims 1-29 of the '801 Patent obvious and therefore invalid. Engelke 2 and Cervantes both describe error correction display methods used in text communication systems. It would have been obvious to a person of ordinary skill in the art to simply substitute the method of displaying error corrections described in Cervantes into the captioned telephone system described in Engelke 2. The combination would have all of the elements of Claims 1-29 of the '801 Patent.

The Engelke 2 reference incorporates by reference the entire Engelke 1 reference. Therefore, the error correction method used in Engelke 1 is also disclosed in Engelke 2. I incorporate my analysis of Engelke 1 above with respect to the various claim elements in the '801 Patent herein as if set forth in full. To the extent that I opined above that Engelke 1 anticipates some of these same patent claims, it should be noted that my opinions below are in addition to those opinions and/or in the alternative.

In terms of their basic set up and operation, the TRS system disclosed in Engelke 1 is almost identical to the TRS system disclosed in the '801 Patent (see II(A)(1) for an overview of the '801 Patent). The call assistant revoices the spoken words of the hearing user and a voice recognition software application transcribes those words into a first block of text and displays that first block of text caption on the call assistant's device (computer screen). This first block of text is placed in a buffer (temporary storage) until it is transmitted to the hard-of-hearing user's device (captioned phone). While the first block of text is still in the call assistant's buffer, the

call assistant may identify and correct any errors before the block of text is transmitted to the hard-of-hearing user's device. The corrected block of text replaces the first uncorrected block of text on the call assistant's device. The call assistant then transmits the corrected block of text from the buffer to the hard-of-hearing user's display.

Engelke 2 further describes, in column 6 at line 52 to column 7 at line 8, that an assisted caller may be provided with a text box on a computer screen into which the relay service forwards captioning text over the internet. That text box may use, for example, a browser plug-in or instant messaging for a consistent updating of the text as it is received.

The Cervantes reference discloses an instant messaging ("IM") system that performs error correction. The Cervantes reference shows that a first user sends a first IM text to a second user. The first user identifies any errors in the first IM text. Then, the first user manually corrects the first IM text and transmits this second generated corrected IM text to the second user. The second IM text (corrected text) replaces the first IM text on the second user's device (as well as the first user's device) and displays the corrected text in the same location that contained the error. The corrected words are tagged (i.e., by highlighting or underlining) so that the second user can identify the location of the corrected IM text. Figure 3 from the Cervantes reference (below) shows the how the corrected instant message is displayed to the recipient as replacing the text message containing errors, with the corrected words tagged for easy identification.

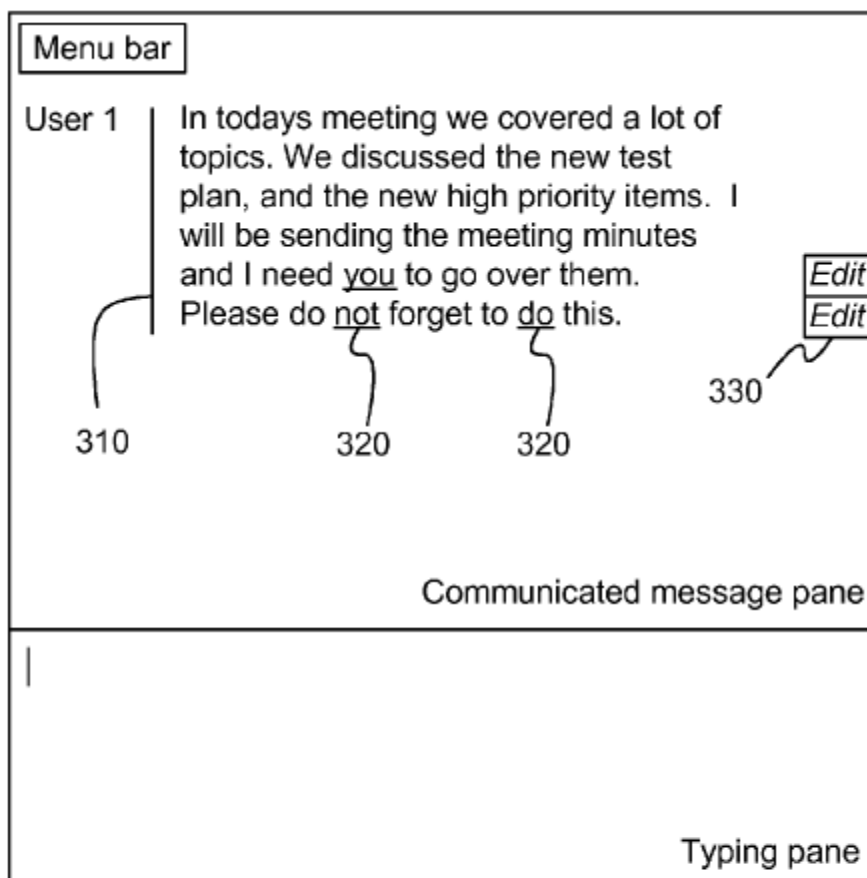
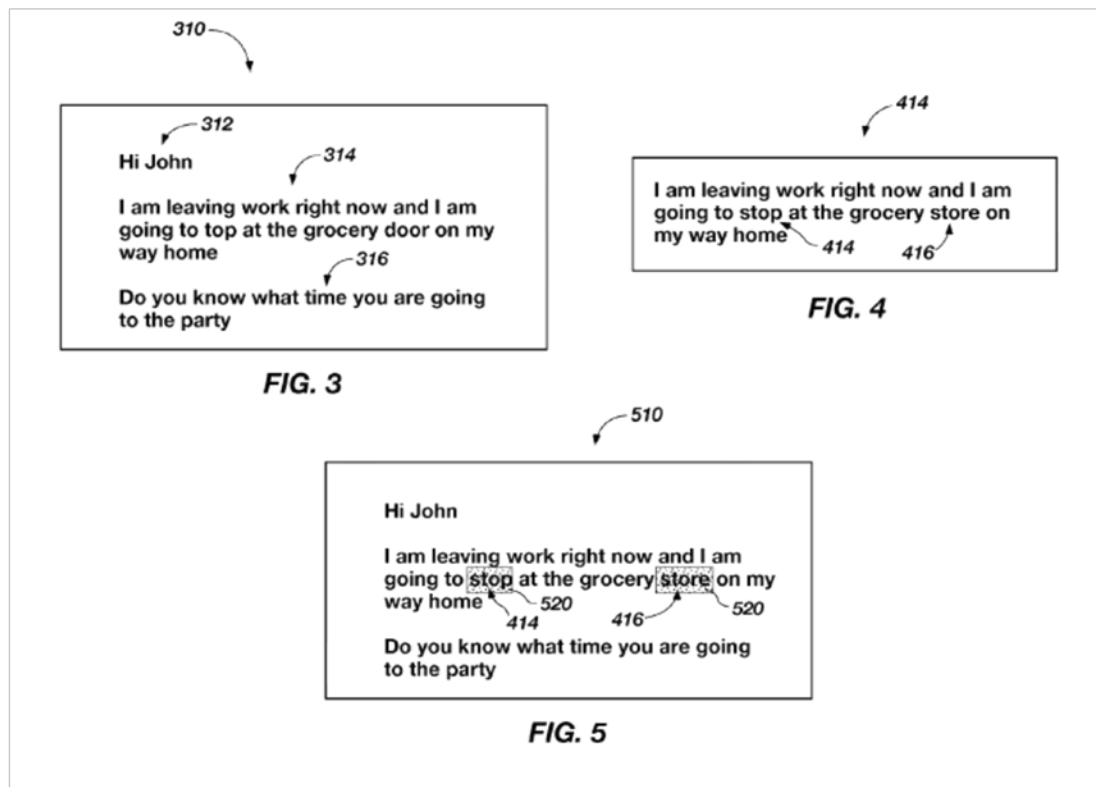


FIG 3

This shows the same type of replacement and tagging as shown by Figures 3-5 in the '801 Patent (below).



b. RATIONALE TO COMBINE REFERENCES.

It would have been obvious to a person of ordinary skill in the art to modify a captioned telephone system such as disclosed in Engelke 2 to introduce error corrections into a text caption in an “in-line” manner, such as taught by Cervantes and claimed in the ‘801 Patent, because (1) there are only a finite number of ways to introduce or position a corrected word or phrase into a text caption stream; (2) a person of ordinary skill in the art would have looked to text transmission applications other than simply TRS for ideas on how to display error corrections, including but not limited to instant messaging applications such as Cervantes; (3) substituting the

manner of displaying error corrections from Cervantes in place of the error correction scheme in Engelke 2 would constitute combining a known feature (in-line display of corrections in instant messaging) with a known system (captioned telephone) to yield a predictable result in which the known feature and known system each still perform the same functions for which they were previously used; and (4) making such a substitution would be a mere matter of design preference and well within the ability of a person of ordinary skill in the art to easily implement. In addition, the use of instant messaging with a captioned telephone service is explicitly disclosed in Engelke 2 and would have further motivated or suggested to a person of ordinary skill in the art to look to error correction display methods in instant messaging art.

First, there are really only a finite number of ways that an error correction (such as a corrected word or phrase) can be introduced and displayed in a text stream in terms of how the correction is positioned with respect to the other text on the screen. Some possibilities include:

- Inserting the correction in place of the incorrect word or phrase before the text is sent to a user (such as shown in Engelke 1);
- Sending uncorrected text right away, then afterward:
 - Re-sending the entire text stream, paragraph, or sentence that contained the error, but now with the correct word or phrase;
 - Appending the corrected word or phrase at the end of the paragraph or sentence that contains the error;
 - Placing the corrected word or phrase on a new line;
 - Inserting the corrected word within a sentence, next to or near the error;
 - Replacing the error with the corrected word or phrase;

- Displaying the corrected word or phrase in a separate location adjacent to the text stream, and using a comment box or bubble, or a line or arrow, to indicate that the corrected word or phrase applies to a specific part of the text caption.

In my opinion, it would not have taken an ordinary person in this field very long to come up with a list of potential design options such as the above. The concept of how and where to place an error correction is not something particularly complicated, and the potential options do not make an expansive list.

Given the design incentives in the field of captioned telephone service, the limitations inherent in CTS and CTS equipment, and the goals and requirements for how CTS must be provided, a person of average skill in the art tasked with implementing a method of displaying error corrections on a CTS devices would narrow down the already small list of design options to just a few. For example, given the relatively small screen size of CTS devices in 2008 and 2009, using unnecessary screen space by adopting a method in which error corrections are placed on a new line or in a bubble or comment box adjacent the text stream would have been a consideration. Below are a photos of the CapTel 200 and CapTel 800i (obtained from CapTel's website), which are examples of CTS devices available in the 2008-2009 timeframe. The CapTel 800i had either the largest or one of the largest screens available.



CapTel 200



CapTel 800i

Even though considered a large screen for a captioned phone in 2009, as shown in the picture of the CapTel 800i, the screen can only display a handful of lines at a time, and each line

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generally has only about 7 or 8 words. As another example of a design incentive that would guide the error correction display decision, it has been a goal of CTS providers to try to have low latency - in other words a small amount of time between when the hearing user says a word and when the text of that word appears on the display on the hard-of-hearing user's captioned phone. Because of these latency concerns, it would have been obvious to look to methods in which uncorrected text is sent right away and then corrections are sent later, if need be, as in the instant messaging error correction methods disclosed in Cervantes. This kind of arrangement helps eliminate the delay caused by a call assistant checking and correcting text, which may otherwise slow down the flow of text to the user. Sending uncorrected text right away would have been recognized as a particularly good option if the CTS provider's voice recognition (or other method of generating text captions) had good inherent accuracy (meaning there would be fewer errors to begin with).

In addition, in most CTS systems, the text captions can scroll fairly rapidly over the screen of the CTS device if necessary to keep up with the conversation. If a CTS provider were to resend an entire paragraph or chunk of the text caption that has a corrected word in it, that resent paragraph or chunk may potentially wind up scrolling off the screen so fast (as new text comes in) that it would be difficult for a user to read. That type of method would require the user to re-read text to figure out what the differences are. Likewise, replacing entire paragraphs, or displaying corrected words somewhere other than in the text stream could be confusing or distracting to a user, who is also trying to comprehend and participate in the on-going conversation. If the corrected word is placed too far from the incorrect word, it may lose context.

For these reasons, it would have been obvious for a person of ordinary skill in the art to look to ways of introducing and positioning error corrections that would insert the corrected text in place of or near the incorrect word. For example, it would have been obvious to try a method such as disclosed in Cervantes, because it would take up a comparatively small amount of space on the CTS device screen, or instant messaging box as contemplated in Engelke 2, and would not create problems of lost context or confusion (provided that the corrected word is highlighted or underlined, as taught by Cervantes, so the user knows a correction was made). The ultimate selection of a particular method would simply be a matter of design choice or preference, rather than R&D or “inventing” something.

Second, a person of ordinary skill in the art would have looked to other real-time text transmission applications outside of the TRS field for ideas on how to introduce and position error corrections in the text stream. Introducing error corrections into a body of text transmitted between two parties was not a new or novel concept when the ‘801 Patent was filed. It was something done in a lot of different fields, including word processing, instant messaging, court reporting, TV closed captioning, and other fields where text is displayed to a user. I worked in the telecommunications industry for the deaf for over 38 years and I spent over 20 of those years developing and modifying TRS platforms for relay service providers and various state agencies. I have also reviewed and implemented various error correction algorithms into TRS software platforms. If I was faced with implementing or improving a product feature like how to display error corrections in a CTS system, like the one in Engelke 2, I would not have hesitated to look to fields like court reporting, instant messaging, TV closed captioning, or other related technologies for concepts or ideas for visual appearance of how text and corrections were

displayed. I am aware that other engineers would (and routinely did) also look to such fields for these kinds of ideas.

Again, the way that an error correction is displayed and put into a text stream is essentially just a matter of design preference in how the CTS provider decides to display the correction, not necessarily an issue of implementing new technology or equipment or interfacing existing technology or equipment. For example, how an error correction is displayed in a CTS setting does not necessarily affect what equipment the provider is using or what communication protocols or platforms the provider is using. Instead, the choice of how to display corrections is really more an issue of preference in terms of appearance, and some minor software coding adjustments.

It is for this reason, in part, that a person of ordinary skill in the art would not have thought he or she needed to stick to only error correction methods existing within the CTS or TRS field for inspiration--there would be no real design or implementation impediment to adopt a concept on how to display corrections from a different field in which text streams are transmitted to users and corrections take place.

Again, Cervantes is a patent on instant messaging, which is well within the type of field a person of ordinary skill in the art would have looked at in 2008 or 2009 (when the '801 Patent was filed) for ideas on how to display error corrections. In fact, as disclosed in Engelke 2, it would have been possible for CTS users to use their computers to handle CTS calls, and watch the text transcriptions in instant messaging windows on the computer screen. Accordingly, it would have been obvious to look to, and adopt, ideas from an instant messaging patent such as Cervantes when designing a CTS system such as in Engelke 2.

Third, substituting the method of displaying corrections taught by Cervantes into the CTS system of Engelke 2 would be nothing more than a combination of well-known systems, with each performing the same functions for which the systems had been known, yielding a predictable result. Engelke 2 is a CTS system. As applicable to the claims of the '801 Patent, it teaches a phone that displays to a hard-of-hearing user a text transcription of what the other party to the call is saying, as well as provides the audio of the other party at the same time. The text transcription is generated by a call assistant at a relay center revoicing the words spoken by the hard-of-hearing user into voice recognition software. If the method of displaying corrections taught by Cervantes were to be used in Engelke, none of these functions or attributes of the Engelke 2 CTS system would change. Engelke 2 would still be a CTS system that provides the same service to its users, namely a text transcription shown at the same time as the audio of the hearing user to the call. And, nothing unusual or unexpected would result from using the method taught by Cervantes to display and transmit corrected errors in the text. The system of Engelke 2 would simply show error corrections in the instant messaging box on the computer screen or on the captioned phone device in-line, rather than making the corrections before the text is sent.

Fourth, modifying the Engelke 2 CTS system to include the method of displaying error corrections taught in Cervantes would have been well within the skill in the art. Based on my 20 years of work experience developing TRS platforms and coding and implementing specific features of TRS systems, it is my opinion that making that modification would have amounted to a simple programming change. It would take little coding effort for a programmer to change the code of a CTS system such as disclosed in Engelke 2 to (1) transmit a block of captioned text to the hard of hearing user before any error corrections are made, then (2) replace the uncorrected block of captioned text with a corrected block of captioned text generated by a call assistant.

Based on my experience, it would take one software developer no more than 100 hours of total software developer time to accomplish such a substitution, including working up a design specification, writing the actual code, testing the software in a CTS platform or test environment, and de-bugging the code.

Finally, once the decision was made to use an “in-line” method of displaying error corrections to a user, it would have been obvious to employ some method of tagging or highlighting the corrected text to visually indicate to the user that a correction was made, such as suggested in Cervantes. Indeed, as Sorenson's Scott Brooksby confirmed, Sorenson had been using tagging of corrections in corrected text in relay systems prior to the purported invention in the '801 Patent. (*See* Rough Brooksby Dep. at 46:22-47:8, 86:10-22). If no tagging or highlighting were made, the user may not be aware that a new, corrected word or phrase was inserted in place of an error in the text caption.

c. INVALIDITY CHART

Below is a chart of how Engelke 2 (UTI00002091-2104) in view of Cervantes (UTI00002105-10) renders obvious Claims 1-29 of the '801 Patent. I have interpreted the claim elements by giving them their ordinary meaning, unless specifically stated otherwise. I incorporate the overview and rationale given above.

Claim of the '801 Patent	Engelke 2 in view of Cervantes
1. A method of providing error correction in a text caption, the method comprising:	Engelke 2 incorporates by reference the entirety of Engelke 1. As discussed above, Engelke 1 teaches error correction in a text captioning system. (UTI00002072 at Abstract). Engelke 2 describes a further text captioning system that utilizes an Internet connection. (UTI00002091 at Abstract).
displaying a text caption on at least one electronic device, the text caption including one or more blocks of text	Engelke 1 discloses that the voice of a hearing user (HU) is provided to a relay computer and is converted at the relay to a text caption that is presented on a display 48 (<i>see</i> UTI00002073-2074 at FIGS. 1 and 3) to a call assistant (CA)

Claim of the '801 Patent	Engelke 2 in view of Cervantes
representing a text transcription of a voice signal;	<p>40 as a text transcription. (UTI00002079-2080 at 3:34-46 and 5:39-56). The CA edits the text transcription to correct for errors at the relay. (UTI00002080 at 6:26-34). The text transcription is then transmitted to an Assisted User (AU) device, which displays the text transcription. (UTI00002073-2074 at FIG. 1, and UTI00002079 at 3:2-5, and 3:20-51). Engelke 2 further describes a system in which the text transcription is transmitted from the relay 56 to an AU device 14 and displayed for the AU, using an Internet-based connection such as an instant messaging (IM) program. (UTI00002094-2096 at Figs. 1, 7, and UTI00002101 at 6:59-64).</p> <p>In Section II(A)(3)(b), above, when the CA device 48/50 of Engelke 1 was taken to be the claimed “at least one electronic device,” the disclosed system of Engelke 1 met each and every limitation of Claim 1 of the '801 Patent. However, given the plain and ordinary meaning of the phrase “at least one electronic device,” the AU device 22/28 of Engelke 1 can also be considered as the “at least one electronic device.” In this section II(B)(2)(c), which sets forth grounds for invalidity based on obviousness, the AU device 22/28 of Engelke 1 will be considered the claimed “at least one electronic device.” As discussed above, Engelke 1 (and thus Engelke 2 by incorporation) discloses that the AU device 22/28 displays a text caption 20 on user terminal 22 that includes one or more blocks of text that represent a transcription of the HU's voice signal. (UTI00002079 at 3:2-5 and 3:60-67).</p>
replacing a first block of text of the text caption with another block of text during a real-time conversation from which the voice signal is generated; and	<p>Cervantes, titled “Method and System for Dynamic Message Correction,” teaches an IM system wherein a block of text (UTI00002106 at FIG. 1) is transmitted to a target user's device after the block of text is typed. (UTI00002109 at 2:17-21). When a previously transmitted block includes an error, the sending user can edit the block and transmit the corrected text block (UTI00002108 at FIG. 3) to the target user's device to replace the previously transmitted block having the error. (UTI00002109 at 2:21-24, 2:39-49, 2:56-65 (“The other chat users would automatically see these changes in the previous message they had received The changed message is displayed as an edited previously-received message”), and UTI00002110 at 3:7-14).</p>

Claim of the '801 Patent	Engelke 2 in view of Cervantes
	<p><i>Rationale for Obviousness:</i></p> <p>Engelke 1 and Engelke 2 teach one text caption error correction solution for use in an TRS system (in which errors in the text caption are corrected <u>before</u> the text caption is sent to the recipient), while Cervantes teaches an alternative text caption error correction solution for use in an IM system (in which errors in the text caption are corrected <u>after</u> the text caption has been sent to the recipient). It would have been obvious to one of ordinary skill in the art to substitute the error correction solution of Cervantes (one known element) for the error correction solution of the Engelke combination (another known element) to yield a predictable result (<i>e.g.</i>, in line correction of previously transmitted erroneous text). Furthermore, given that the two solutions are two of a finite number of concepts for displaying error corrections in transmitted text conversations (errors can either be corrected before or after the text caption is sent to a user), it would have been obvious to try substituting the solution of Cervantes for the teachings of the Engelke references, with a reasonable expectation of success.</p> <p>In addition, Cervantes teaches that prior correction methods displayed corrected text on a target device as a new message instead of as in-line corrected text within the originally transmitted text block. (<i>See, e.g.</i>, UTI00002107 at FIG 2). Cervantes recognizes that the prior art solution required a user of the target device to return to an originally received block of text and read the text again along with the new corrected text in order to understand the correction. (UTI00002109 at 2:29-31 and UTI00002107 at FIG. 2). In other words, Cervantes recognizes and addresses the same problem subsequently described in the '801 Patent at col. 1, lines 49-64. Thus, one skilled in the art would have understood that Cervantes' text correction solution (which is essentially the same technique as disclosed in the '801 Patent) is an obvious design choice for error correction display in transmitted text conversations such as in the Engelke references.</p>

Claim of the '801 Patent	Engelke 2 in view of Cervantes
displaying another block of text within the text caption on the at least one electronic device at a location of the first block of text within the text caption.	Cervantes discloses that the corrected block of text replaces the original, erroneous block of text in the display of the recipient's electronic device at the same location at which the original erroneous block of text had appeared. (UTI00002109 at 2:29-31 and UTI00002107 at FIG. 2).
2. The method of claim 1, further comprising identifying one or more errors within the first block of text of the text caption with respect to what was said in the voice signal prior to generating the another block of text.	Engelke 1 teaches that the CA listens to the voice signal 17 of the conversation and revoices the conversation to the voice recognition system 44, which provides an editing text signal 46. (UTI00002079 at 3:33-45). The CA can then read the scrolling text caption generated by the voice recognition system to identify whether an error exists in the text caption, based upon what the CA heard the hearing user say. If there is an error, the CA can correct the error directly in the text caption. (UTI00002072 at Abstract and UTI00002080 at 6:13-25).
3. The method of claim 1, further comprising generating the another block of text with a first device and	As discussed above, Engelke 1 describes a system in which a CA operating a relay uses a first device 48/50 to generate corrected text and an AU uses a second device 22/28 to receive the corrected text as part of a complete text block for display. (UTI00002073 at FIG. 1, and UTI00002079 at 3:2-5, and 3:20-51). Engelke 2 describes a further system in which the relay 56 and AU's device 14 are linked via an instant messaging (IM) program that transmits corrected, transcribed text from a first device (the relay 56, which includes the CA's computer) to a second device (<i>e.g.</i> , the AU's computer 14). (UTI00002094-2096 at Figs. 1, and 7, and UTI00002101 at 6:59-64).
transmitting the another block of text to the at least one electronic device.	Cervantes teaches an IM system wherein a block of text (<i>see, e.g.</i> , UTI00002106 at FIG. 1) is generated at a first device and transmitted to a target user's device (the "at least one electronic device") after the block of text is typed. (UTI00002109 at 2:17-21). When a previously transmitted block includes an error, the sending user can edit the block on his or her device (<i>i.e.</i> , the "first device") and transmit the corrected text block (<i>see, e.g.</i> , UTI00002108 at FIG. 3) to the target user's device (<i>i.e.</i> , the "at least one electronic device") to replace the previously transmitted block having the error. (UTI00002109 at 2:21-24, 2:39-49, 2:56-65 ("The other chat users would automatically see these changes in . . . the previous message they had received . . . The changed

Claim of the '801 Patent	Engelke 2 in view of Cervantes
	<p>message is displayed . . . as an edited previously-received message . . .”), and 3:7-14).</p> <p>For the reasons discussed above with respect to Claim 1, it would have been obvious to substitute the error correction solution of Cervantes, which includes transmission of corrected text blocks from a first device to at least one other electronic device, into the system of Engelke 1 and Engelke 2.</p>
<p>4. The method of claim 3, wherein generating another block of text comprises: identifying one or more errors within the first block of text of the text caption; and</p>	<p>In the error correction display solution of Cervantes, a first device displays the entire text conversation to the user of the first device, so that such user can identify errors in the text that he or she previously transmitted. (UTI00002109 at 2:39-45 and UTI00002106 at FIG. 1). In the combination with Engelke 1 and Engelke 2, the first device is the CA’s computer operating the relay. (UTI00002073 at FIG. 1, UTI00002079 at 3:2-5, and 3:20-51; UTI00002094-2096 at Figs. 1, 7, and UTI00002101 at 6:59-64).</p>
<p>generating the another block of text including the first block of text of the text caption having each of the one or more errors replaced with corrected text within the text caption.</p>	<p>Cervantes teaches that the user of the first device generates an edited block of text that includes corrected text as well as other text that was originally correct. (UTI00002109 at 2:5-12 (“One of the embodiments of this invention allows users in an instant messaging environment to dynamically edit previous messages that have been exchanged, and resend the edited version of the message to the target users.”), 2:39-47, and 2:51-60).</p> <p>For the reasons discussed above with respect to Claim 1, it would have been obvious to substitute the error correction solution of Cervantes into the system of Engelke 1 and Engelke 2.</p>
<p>5. The method of claim 4, wherein displaying the another block of text further comprises tagging the corrected text within the text caption.</p>	<p>Cervantes teaches that when an edited block of text is displayed, the corrected text can be “highlighted, colored, underlined (320), or otherwise re-formatted for the purpose of notification.” (UTI00002109 at 2:45-50 and UTI00002108 at FIG. 3).</p> <p>For the reasons discussed above with respect to Claim 1, it would have been obvious to substitute the error correction solution of Cervantes, including the feature of tagging corrected text, into the system of Engelke 1 and Engelke 2.</p>

Claim of the '801 Patent	Engelke 2 in view of Cervantes
<p>6. The method of claim 5, wherein tagging the corrected text comprises highlighting the corrected text within the text caption.</p>	<p>Cervantes teaches that when an edited block of text is displayed, the corrected text in such block can be “highlighted, colored, underlined (320), or otherwise re-formatted for the purpose of notification.” (UTI00002109 at 2:45-50 and UTI00002108 at FIG. 3). For the reasons discussed above with respect to Claim 1, it would have been obvious to substitute the error correction solution of Cervantes, including the feature of highlighting corrected text, into the system of Engelke 1 and Engelke 2.</p>
<p>7. The method of claim 1, wherein the first block of text of the text caption includes one or more errors, and wherein the another block of text includes corrected words.</p>	<p>Engelke 1 teaches that the CA listens to the voice signal 17 of the conversation and revoices the conversation to the voice recognition system 44, which provides an editing text signal 46. (UTI00002079 at 3:33-45). The CA can then read the scrolling text caption generated by the voice recognition system to identify whether an error exists in the text caption. If there is an error, the CA can correct the error directly in the text caption creating another block of corrected text. (UTI00002072 at Abstract and UTI00002080 at 6:13-34).</p> <p>In addition, Cervantes discloses sending a first block of text to a second user, noticing errors in the first block of text, correcting the errors, and the transmitting a second block of text containing the corrected words. (UTI00002109 at 2:39-45 and UTI0000).</p>
<p>8. The method of claim 1, further comprising generating the text caption on a first device and transmitting the text caption to the at least one electronic device.</p>	<p>As discussed above, Engelke 1 describes a system in which a relay generates a text caption from a HU’s voice signal, a CA corrects errors in the text caption at the relay, and an AU uses a second device 22/28 to receive the corrected text as part of a complete text block for display. (UTI00002073 at FIG. 1, UTI00002078-2079 at 2:66-3:5, and 3:20-51). Engelke 2 describes a further system in which the relay 56 and AU’s device 14 are linked via an IM system that transmits corrected, transcribed text from a first device (the relay 56, which includes the CA’s computer) to a second device (<i>e.g.</i>, the AU’s computer 14). (UTI00002094-2096 at Figs. 1, 7, and UTI00002101 at 6:59-64).</p> <p>Cervantes also describes a system in which a text caption of a conversation is generated at a sending user’s device (<i>i.e.</i>, a “first device”) when the sending user types his or her message. UTI00002106 at FIG. 1 and UTI00002109 at 2:20-21). The</p>

Claim of the '801 Patent	Engelke 2 in view of Cervantes
	text is transmitted to a receiving user's device (<i>i.e.</i> , "at least one electronic device") and displayed for the receiving user. (UTI00002106 at FIG. 1 and UTI00002109 at 1:41-49).
9. A communication system, comprising:	Engelke 1 teaches a system to enable communication between a hearing user (HU) 12 and an assisted user (AU) 14. (UTI00002078 at 1:18-21 and 1:33-38). Engelke 2 teaches a further system in which the text communication between the HU and the AU entails use of an Internet connection. (UTI00002091 at Abstract).
a communication device including a processor; a computer-readable medium coupled to the processor; a display coupled to the processor; and at least one application program stored in the computer-readable medium,	Engelke 2 discloses a communication device used by an AU that may comprise a desktop computer 14 (alone or in combination with a telephone 12) connected to transmit and receive telephone signals and text captions via an Internet connection 30, including via voice over Internet protocol (VOIP) 52. (UTI00002094 at FIG. 1, UTI00002101 at 5:1-4, and 5:19-23). The desktop computer comprises a base unit 18, which includes a processor and memory, and a display screen 16. (UTI00002100 at 4:53-59). A text-captioning program 58 is stored on the computer 14. (UTI00002101 at 5:48-54).
wherein the at least one application program, when executed by the processor, is configured to: display a text caption including one or more blocks of text on the display, the text caption indicating a text transcription of a voice signal received by the communication device; and	The text-captioning program 58 of Engelke 2, when executed by the processor 18 of computer 14, displays a text caption on the display screen 16 for the AU to view. (UTI00002101 at 6:1-9). The text caption is a transcription of a voice communication, comprising blocks of text, received from the relay 56. (UTI00002094 at FIG. 1, FIG. 3, and UTI00002101 at 5:19-30).
display another block of text within the text caption on the display at a location that	As discussed above, Cervantes teaches an IM system wherein a block of text (<i>see, e.g.</i> , UTI00002106 at FIG. 1) is transmitted to a target user's device after the block

Claim of the '801 Patent	Engelke 2 in view of Cervantes
corresponds to an actual location as produced by the voice signal.	<p>of text is typed. (UTI00002109 at 2:17-21).</p> <p>When a previously transmitted block includes an error, the sending user can edit the block and transmit the corrected text block (<i>see, e.g.</i>, UTI00002108 at FIG. 3) to the target user's device to replace the previously transmitted block having the error. (UTI00002109 at 2:21-24, 2:39-49, and 2:56-65 ("The other chat users would automatically see these changes in the previous message they had received. The changed message is displayed as an edited previously-received message."), and UTI00002110 at 3:7-14).</p> <p><i>Rationale for Obviousness:</i></p> <p>Engelke 1 and Engelke 2 teach one text caption error correction solution for use in an TRS system (in which errors in the text caption are corrected <u>before</u> the text caption is sent to the recipient), while Cervantes teaches an alternative text caption error correction solution for use in an IM system (in which errors in the text caption are corrected <u>after</u> the text caption has been sent to the recipient). It would have been obvious to one of ordinary skill in the art to substitute the error correction solution of Cervantes (one known element) for the error correction solution of the Engelke combination (another known element) to yield a predictable result (<i>e.g.</i>, in line correction of previously transmitted erroneous text). Furthermore, given that the two solutions are two of a finite number of concepts for displaying error corrections in transmitted text conversations (errors can either be corrected before or after the text caption is sent to a user), it would have been obvious to try substituting the solution of Cervantes for the teachings of the Engelke references, with a reasonable expectation of success.</p> <p>In addition, Cervantes teaches that prior correction methods displayed corrected text on a target device as a new message instead of as in-line corrected text within the originally transmitted text block. (<i>See, e.g.</i>, UTI00002107 at FIG 2). Cervantes recognizes that the prior art solution required a user of the target device to return to an original received block of text and read the text again along with the new corrected text in order to understand the correction. (UTI00002109 at 2:29-31 and UTI00002107 at FIG. 2). In other words, Cervantes recognizes and addresses the same problem subsequently described in the '801 Patent at col. 1,</p>

Claim of the '801 Patent	Engelke 2 in view of Cervantes
	lines 49-64. Thus, one skilled in the art would have understood that Cervantes' text correction solution (which is essentially the same technique as disclosed in the '801 Patent) is an obvious design choice for error correction in transmitted text conversations such as in the Engelke references.
10. The communication system of claim 9, wherein the at least one application program is further configured to tag at least one word of the another block of text within the text caption as a corrected word.	<p>Cervantes teaches that when an edited block of text is displayed, the corrected text can be "highlighted, colored, underlined (320), or otherwise re-formatted for the purpose of notification." (UTI00002109 at 2:45-50 and UTI00002108 at FIG. 3).</p> <p>For the reasons discussed above with respect to Claim 9, it would have been obvious to substitute the error correction solution of Cervantes, including the feature of tagging corrected text, into the system of Engelke 1 and Engelke 2.</p>
11. The communication system of claim 9, wherein the at least one application program is further configured to display at least one word within the text caption having the one or more blocks of text of the text caption replaced by the another block of text as highlighted.	<p>Cervantes teaches that when an edited block of text is displayed, the corrected text in such block can be "highlighted, colored, underlined (320), or otherwise re-formatted for the purpose of notification." (UTI00002109 at 2:45-50 and UTI00002108 at FIG. 3).</p> <p>For the reasons discussed above with respect to Claim 9, it would have been obvious to substitute the error correction solution of Cervantes, including the feature of highlighting corrected text, into the system of Engelke 1 and Engelke 2.</p>
12. The communication system of claim 9, wherein a highlighted word is indicative of a corrected word.	<p>Cervantes teaches that when an edited block of text is displayed, the corrected text in such block can be "highlighted, colored, underlined (320), or otherwise re-formatted for the purpose of notification." (UTI00002109 at 2:45-50, UTI00002108 at FIG. 3). In other words, highlighting is used to notify the receiving user that the highlighted word has been corrected.</p> <p>For the reasons discussed above with respect to Claim 9, it would have been obvious to substitute the error correction solution of Cervantes, including the feature of highlighting corrected text, into the system of Engelke 1 and Engelke 2.</p>
13. The communication system of claim 9, wherein the at least one application program is further configured to replace at	Cervantes teaches that after text is corrected on the sending user's device, the sending user only has to select an ENTER function to cause the corrected block of text to immediately be sent to the target user's device and to be used by the such

Claim of the '801 Patent	Engelke 2 in view of Cervantes
least one block of text of the text caption with the another block of text and display the text caption on the display of the communication device substantially simultaneously.	<p>device to correct the error in the already-displayed text caption. UTI00002109 at 1:50-53).</p> <p>For the reasons discussed above with respect to Claim 9, it would have been obvious to substitute the error correction solution of Cervantes, including the feature of allowing the receiving user's device to immediately replace the erroneous block of text with the corrected block of text in the text caption, into the system of Engelke 1 and Engelke 2.</p>
14. A computer-readable media storage medium storing instructions that when executed by a processor cause the processor to perform a method for providing error correction in a text caption, the method comprising:	<p>Engelke 2 discloses a communication device used by an AU that may comprise a desktop computer 14 (alone or in combination with a telephone 12) connected to transmit and receive telephone signals and corrected text captions. (UTI00002094 at FIG. 1, and UTI00002101 at 5:1-4, and 5:19-23). The desktop computer comprises a base unit 18, which includes a processor and a memory that is computer readable, and a display screen 16. (UTI00002100 at 4:53-59). A text-captioning program 58 is stored in the computer's memory so that it can be executed by the computer. (UTI00002101 at 5:48-54).</p>
displaying a text caption representing a text transcription of a voice signal transmitted between a first device and a second device, the text caption including at least one block of text; and	<p>Engelke 1 teaches a system to enable communication between a hearing user (HU) 12 and an assisted user (AU) 14. (UTI00002078 at 1:18-21 and 1:33-38). Engelke 2 teaches a further system in which the text communication between the HU and the AU entails use of an Internet connection to a relay 56. (UTI00002091 at Abstract).</p> <p>The text-captioning program 58 of Engelke 2, when executed by the processor 18 of computer 14, displays a text caption on the display screen 16 for the AU to view. (UTI00002101 at 6:1-9). The text caption is a transcription of a voice communication, comprising blocks of text, transmitted between the relay 56 and the AU's computer 14. (UTI00002094 at FIG. 1, FIG. 3, and UTI00002101 at 5:19-30).</p>
displaying another block of text within the text caption on at least one of the first device and the second device by replacing the at least one block of text by the another block of text at a location of the at least one block of text within the	<p>As discussed above, Cervantes teaches an IM program wherein a block of text (<i>see, e.g.</i>, UTI00002106 at FIG. 1) is transmitted to a target user's device after the block of text is typed. (UTI00002109 at 2:17-21). When a previously transmitted block includes an error, the sending user can edit the block and transmit a corrected text block (<i>see, e.g.</i>, UTI00002108 at FIG. 3) to the target user's device to replace the previously transmitted block having the error.</p>

Claim of the '801 Patent	Engelke 2 in view of Cervantes
text caption.	<p>(UTI00002109 at 2:21-24, 2:39-49, 2:56-65 (“The other chat users would automatically see these changes in the previous message they had received. The changed message is displayed as an edited previously-received message.”), and UTI00002110 at 3:7-14).</p> <p>The corrected text block is displayed on both the sending user’s device and the target user’s device. (UTI00002109-2110 at 2:21-24, 2:39-49, 2:56-65, and 3:7-14).</p> <p><i>Rationale for Obviousness:</i></p> <p>Engelke 2 teaches a text caption error correction solution for use in a relay system that may include an IM system in which the relay 56 corrects errors in the text caption <u>before</u> the text caption is sent to the AU’s device 14. Cervantes teaches an alternative text caption error correction solution for use in an IM system in which errors in the text caption are corrected <u>after</u> the text caption has been sent to the recipient. It would have been obvious to one of ordinary skill in the art to substitute the error correction solution of Cervantes (one known element) for the error correction solution of Engelke 2 (another known element) to yield a predictable result (<i>e.g.</i>, in-line correction of previously transmitted erroneous text). By combining the software solutions of Cervantes and Engelke 2, the unedited text caption in the system of Engelke 2 could be sent directly from the relay 56 to the text caption window 60 on the AU’s device 14 and then error corrections could be transmitted by the relay 56 afterward (<i>i.e.</i>, in the manner taught by Cervantes), so that the AU could see the text caption faster by not having to wait for corrections to be made. Furthermore, given that the two solutions of Engelke 2 and Cervantes are two of a finite number of concepts for displaying error corrections in transmitted text conversations (errors can either be corrected before or after the text caption is sent to a user), it would have been obvious to try substituting the solution of Cervantes for the teachings of the Engelke references, with a reasonable expectation of success.</p> <p>In addition, Cervantes teaches that prior correction methods displayed corrected text on a target device as a new message instead of as in-line corrected text within the originally transmitted text block. <i>See, e.g.</i>, UTI00002107 at FIG. 2.</p>

Claim of the '801 Patent	Engelke 2 in view of Cervantes
	<p>Cervantes recognizes that the prior art solution required a user of the target device to return to an original received block of text and read the text again along with the new corrected text in order to understand the correction. (UTI00002109 at 2:29-31 and UTI00002107 at FIG. 2). In other words, Cervantes recognizes and addresses the same problem subsequently described in the '801 Patent at col. 1, lines 49-64. Thus, one skilled in the art would have understood that Cervantes' text correction solution (which is essentially the same technique as disclosed in the '801 Patent) is an obvious design choice for error correction in transmitted text conversations such as in the Engelke references.</p>
<p>15. The computer-readable media storage medium of claim 14, wherein displaying the another block of text within the text caption includes identifying at least one word within the another block of text with a tag.</p>	<p>Cervantes teaches that when an edited block of text is displayed, the corrected text can be "highlighted, colored, underlined (320), or otherwise re-formatted for the purpose of notification." (UTI00002109 at 2:45-50 and UTI00002108 at FIG. 3).</p> <p>For the reasons discussed above with respect to Claim 14, it would have been obvious to substitute the error correction solution of Cervantes, including the feature of tagging corrected text, into the program of Engelke 2.</p>
<p>16. The computer- readable media storage medium of claim 15, wherein identifying at least one word within the another block of text with a tag comprises highlighting the at least one word.</p>	<p>Cervantes teaches that when an edited block of text is displayed, the corrected text in such block can be "highlighted, colored, underlined (320), or otherwise re-formatted for the purpose of notification." (UTI00002109 at 2:45-50 and UTI00002108 at FIG. 3).</p> <p>For the reasons discussed above with respect to Claim 14, it would have been obvious to substitute the error correction solution of Cervantes, including the feature of highlighting corrected text, into the program of Engelke 2.</p>
<p>17. A method, comprising: generating a text caption as a text transcription of a voice signal;</p>	<p>Engelke 2 teaches a method. (UTI00002101 at 5:25-30).</p> <p>Engelke 1 teaches that the voice of a hearing user (HU) is provided to a relay computer and is converted at the relay to generate a text caption. (UTI00002073-2074 at FIG. 1, FIG. 3, and UTI00002079-2080 at 3:34-46, and 5:39-56). Engelke 1 teaches that this may be done using a voice recognition program 70 running on the relay computer 18. (UTI00002079 at 4:12-30).</p>

Claim of the '801 Patent	Engelke 2 in view of Cervantes
	Engelke 2 also teaches the generation of a text caption from a voice signal by means of transcription. (UTI00002101 at 5:25-30 (“At the relay service 56, the encoded voice signals may be converted back to an analog signal for transcription by a call assistant who produces corresponding captioning text 55 that may be relayed through conventional Internet transfer protocols back to the computer 14 where the txt may be displayed.”)).
transmitting the text caption to a communication device;	Engelke1 and Engelke 2 both teach that the text caption generated at the relay is transmitted to the AU’s device (<i>i.e.</i> , the “communication device”). (<i>See</i> UTI00002072 at Abstract; UTI00002080 at 5:25-30).
identifying an error in a block of text within the text caption; and	<p>Engelke 1 teaches that the CA identifies errors in the text caption displayed on the CA’s display 48 that was generated by the voice recognition software 70. The CA can select the erroneous text and provide a correction by either speaking the correct language to the voice recognition software or typing the correct text into the text caption. (UTI00002080 at 6:13-25).</p> <p>Similarly, Cervantes teaches that a sending user identifies errors by viewing the text conversation on the sending user’s screen, and corrects the errors by selecting the erroneous text and typing the corrected text directly into the text conversation. (UTI00002109 at 2:39-45).</p>
transmitting a corrected block of text to the communication device as an inline correction for the text caption to replace the block of text within the text caption with the corrected block of text at a proper location as produced in the voice signal during communication between at least two parties.	<p>In the error correction solution of Engelke 1 and Engelke 2, a text caption is transmitted from the relay to an AU after error correction has already been performed by the CA.</p> <p>In Cervantes, however, the text conversation is first transmitted from the sending user’s device to the target user’s device. Then, if the sending user later notices an error, a corrected block of text can be transmitted from the sending user’s device to the target user’s device to replace the previously-sent and erroneous block of text at the same location at which the erroneous block of text had appeared on the target user’s display. <i>See, e.g.</i>, UTI00002105 at Abstract.</p> <p>Using the error correction display solution of Cervantes in the system of Engelke 1 and Engelke 2 would result in the claimed subject matter. Specifically, the CA would transmit a corrected block of text after the raw text caption from the</p>

Claim of the '801 Patent	Engelke 2 in view of Cervantes
	<p>voice recognition software had already been sent to the AU's device. Per the teachings of both Cervantes and Engelke 1 the corrected block of text would replace the erroneous block of text a proper location as originally produced in the transcription of the voice conversation between the HU and AU. (<i>See, e.g.</i>, UTI00002080 at 6:26-34 ("The mapping of words to spatial locations by the [CA's display] window 112 allows the [erroneous] word to be quickly identified and replaced while it is being dynamically moved through the queue according to its assigned aging.")).</p> <p><i>Rationale for Obviousness:</i></p> <p>Engelke 2 teaches a text caption error correction solution for use in a TRS system, which may include an IM box for display of the captioning to the AU, in which the relay 56 corrects errors in the text caption <u>before</u> the text caption is sent to the AU's device 14. Cervantes teaches an alternative text caption error correction solution for use in an IM system in which errors in the text caption are corrected <u>after</u> the text caption has been sent to the recipient. It would have been obvious to one of ordinary skill in the art to substitute the error correction solution of Cervantes (one known element) for the error correction solution of Engelke 2 (another known element) to yield a predictable result (<i>e.g.</i>, in-line correction of previously transmitted erroneous text). By combining the software programs of Cervantes and Engelke 2, the unedited text caption in the system of Engelke 2 could be sent directly from the relay 56 to the text caption window 60 on the AU's device 14 and then error corrections could be transmitted by the relay 56 afterward (<i>i.e.</i>, in the manner taught by Cervantes), so that the AU could see the text caption faster by not having to wait for corrections to be made. Furthermore, given that the two solutions of Engelke 2 and Cervantes are two of a finite number of concepts for displaying error corrections in transmitted text conversations (errors can either be corrected before or after the text caption is sent to a user), it would have been obvious to try substituting the solution of Cervantes for the teachings of the Engelke references, with a reasonable expectation of success.</p> <p>In addition, Cervantes teaches that prior correction methods displayed corrected text on a target device as a new message</p>

Claim of the '801 Patent	Engelke 2 in view of Cervantes
	<p>instead of as in-line corrected text within the originally transmitted text block. (<i>See, e.g.</i>, UTI00002107 at FIG. 2). Cervantes recognizes that the prior art solution required a user of the target device to return to an original received block of text and read the text again along with the new corrected text in order to understand the correction. (UTI00002109 at 2:29-31 and UTI00002107 at FIG. 2). In other words, Cervantes recognizes and addresses the same problem subsequently described in the '801 Patent at col. 1, lines 49-64. Thus, one skilled in the art would have understood that Cervantes' text correction solution (which is essentially the same technique as disclosed in the '801 Patent) is an obvious design choice for error correction in transmitted text conversations such as in the Engelke references.</p>
<p>18. The method of claim 17, wherein the error is a disagreement between the text caption and what was stated in the voice signal.</p>	<p>Engelke 1 teaches that the CA listens to the voice signal 17 of the conversation and revoices the conversation to the voice recognition system 44, which provides an editing text signal 46. (UTI00002079 at 3:33-45). The CA can then read the scrolling text caption generated by the voice recognition system to determine whether the text caption is in agreement with the voice signal the CA is hearing. If there is an error, the CA can correct the error directly in the text caption. (UTI00002072 at Abstract and UTI00002080 at 6:13-25).</p>
<p>19. The method of claim 17, wherein transmitting the text caption and the corrected block of text includes transmitting data from a relay service including a call assistant to facilitate communication between a hearing-impaired user and a hearing-capable user.</p>	<p>Engelke 1 teaches a system in which data is transmitted from a relay 10 including a CA 40 to an AU 14 to facilitate communication between a HU 12 and the AU 14. (UTI00002073 at FIG. 1). Specifically, the relay 10 and CA 40 transmit to the AU 14 a text caption 20 transcribed from the voice signal 16 of the HU 12. UTI00002073 at FIG. 1 and UTI00002078 at 2:66-3:5). Engelke 2 teaches a similar relay system 56 for facilitating communication between a HU using phone 28 and an AU using computer 14. (UTI00002094 at FIG. 1).</p>
<p>20. The method of claim 19, further comprising receiving the voice signal at the relay service for generating the text transcription of the voice signal.</p>	<p>Engelke 1 teaches that the CA receives and listens to the voice signal 17 of the conversation and revoices the conversation to the voice recognition system 44, which provides an editing text signal 46. (UTI00002079 at 3:33-45). The CA can then read the scrolling text caption generated by the voice recognition system to determine whether the text caption is in agreement with the voice signal the CA is hearing. If there is an error, the CA can correct the error directly in the text caption. (UTI00002072 at Abstract and</p>

Claim of the '801 Patent	Engelke 2 in view of Cervantes
	<p>UTI00002080 at 6:13-25). The corrected text caption 20 is then transmitted to the AU. Engelke 2 further describes a system in which the text transcription is transmitted from the relay 56 to an AU device 14 and displayed for the AU, using an Internet-based connection such as an instant messaging (IM) program. (UTI00002094-2096 at Figs. 1, 7, and UTI00002101 at 6:59-64).</p>
<p>21. The method of claim 20, further comprising generating the text transcription of the voice signal by employing a voice recognition program.</p>	<p>Engelke 1 teaches that the CA receives and listens to the voice signal 17 of the conversation and revoices the conversation to the voice recognition system 44, which provides an editing text signal 46. (UTI00002079 at 3:33-45). The CA can then read the scrolling text caption generated by the voice recognition system to determine whether the text caption is in agreement with the voice signal the CA is hearing. If there is an error, the CA can correct the error directly in the text caption. (UTI00002072 at Abstract and UTI00002080 at 6:13-25). The corrected text caption 20 is then transmitted to the AU.</p>
<p>22. The method of claim 21, wherein generating the text caption includes the call assistant revoicing words heard from the voice signal for the voice recognition program to generate the text caption.</p>	<p>Engelke 1 teaches that the CA receives and listens to the voice signal 17 of the conversation and revoices the conversation to the voice recognition system 44, which provides an editing text signal 46. (UTI00002079 at 3:33-45). The CA can then read the scrolling text caption generated by the voice recognition system to determine whether the text caption is in agreement with the voice signal the CA is hearing. If there is an error, the CA can correct the error directly in the text caption. (UTI00002072 at Abstract and UTI00002080 at 6:13-25). The corrected text caption 20 is then transmitted to the AU.</p>
<p>23. The method of claim 19, further comprising displaying the text caption on a communication device associated with the call assistant.</p>	<p>Engelke 1 teaches that the text caption generated by the voice recognition system 70 is displayed on the CA's display 48 (<i>i.e.</i>, "communication device") so that the CA can determine whether the text caption is in agreement with the voice signal the CA is hearing. (UTI00002080 at 5:36-50).</p>
<p>24. The method of claim 17, further comprising a call assistant generating the corrected block of text by inputting edits into the block of text prior to the corrected block of text being transmitted to the</p>	<p>Engelke 1 teaches that the text caption generated by the voice recognition system 70 is displayed on the CA's display 48 (<i>i.e.</i>, "communication device") so that the CA can make any needed corrections to the text caption prior to the text caption being transmitted to the AU's device. (UTI00002080 at 6:13-25 ("Prior to the words being . . . transmitted (thus while</p>

Claim of the '801 Patent	Engelke 2 in view of Cervantes
communication device.	<p>the words are still in the queue 122), a correction of transcription errors may occur.”). Thus, the CA generates the corrected blocks of text in the text caption before the corrected blocks of text are sent to the AU’s device.</p> <p>Similarly, Cervantes teaches that a text error is edited by the sending user prior to the sending user selecting an ENTER function to transmit the corrected text to a target user’s device. (UTI00002109 at 1:50-56 and 2:43-45).</p>
25. A method, comprising:	Engelke 2 teaches a method. (UTI00002101 at 5:25- 30).
displaying a text caption on a communication device, the text caption corresponding to a text transcription of at least a portion of a voice signal of a conversation between at least two parties;	<p>Engelke 1 teaches that the voice of a hearing user (HU) is provided to a relay 10 and is transcribed at the relay to a text caption 20 that is displayed to an AU 14 on a communication device 22. (UTI00002073-2074 at FIG. 1, FIG. 3, and UTI00002078-2080 at 2:66-3:5, 3:34-46, and 5:39-56).</p> <p>Engelke 2 also teaches the generation of a text caption from a voice signal by means of transcription. (UTI00002101 at 5:25-30 (“At the relay service 56, the encoded voice signals may be converted back to an analog signal for transcription by a call assistant who produces corresponding captioning text 55 that may be relayed through conventional Internet transfer protocols back to the computer 14 where the text may be displayed.”).</p>
receiving a corrected block of text for at least one block of text within the text caption;	<p>In the system of Engelke 1, the relay 10 and CA 40 transmit to the AU 14 a text caption 20 that was transcribed from the voice signal 16 of the HU 12 via voice recognition and edited by the CA to correct transcription errors. (UTI00002073 at FIG. 1, and UTI00002078-2080 at 2:66-3:5, and 6:13-25). Engelke 2 teaches a similar relay system 56 for transmitting corrected text to an AU using computer 14. (UTI00002094 at FIG. 1).</p>
displaying the corrected block of text within the text caption as an inline correction during the conversation, such that the corrected block of text appears within the text caption in place of the at least one block of text; and	<p>In the error correction solution of Engelke 1 and Engelke 2, a text caption is transmitted from the relay to an AU’s device after error correction has already been performed by the CA on the text caption.</p> <p>In Cervantes, however, the text conversation is first transmitted from the sending user’s device to the target user’s device. Then, if the sending user later notices an error, a corrected block of text can be transmitted from the sending user’s device to the target user’s device to replace the previously-sent and erroneous block of text as an inline</p>

Claim of the '801 Patent	Engelke 2 in view of Cervantes
	<p>correction at the same location at which the erroneous block of text had appeared on the target user's display. (<i>See, e.g.</i>, UTI00002108 at FIG. 3).</p> <p>Using the error correction solution of Cervantes in the system of Engelke 1 and Engelke 2 would result in the claimed subject matter. Specifically, the CA would transmit a corrected block of text after the raw text caption from the voice recognition software had already been sent to the AU's device. Per the teachings of both Cervantes and Engelke 1 the corrected block of text would replace the erroneous block of text at a proper location as originally produced in the transcription of the voice conversation between the HU and AU. (<i>See, e.g.</i>, UTI00002080 at 6:26-34 ("The mapping of words to spatial locations by the [CA's display] window 112 allows the [erroneous] word to be quickly identified and replaced while it is being dynamically moved through the queue according to its assigned aging.")).</p> <p><i>Rationale for Obviousness:</i></p> <p>Engelke 1 and 2 teaches a text caption error correction solution for use in a TRS system in which the relay 56 corrects errors in the text caption <u>before</u> the text caption is sent to the AU's device 14. Cervantes teaches an alternative text caption error correction solution for use in an IM system in which errors in the text caption are corrected <u>after</u> the text caption has been sent to the recipient. It would have been obvious to one of ordinary skill in the art to substitute the error correction solution of Cervantes (one known element) for the error correction solution of Engelke 2 (another known element) to yield a predictable result (<i>e.g.</i>, in-line correction of previously transmitted erroneous text). By combining the software programs of Cervantes and Engelke 2, the unedited text caption in the system of Engelke 2 could be sent directly from the relay 56 to the text caption window 60 on the AU's device 14 and then error corrections could be transmitted by the relay 56 afterward (<i>i.e.</i>, in the manner taught by Cervantes), so that the AU could see the text caption faster by not having to wait for corrections to be made. Furthermore, given that the two solutions of Engelke 2 and Cervantes are two of a finite number of concepts for displaying error corrections in transmitted text conversations (errors can either be corrected before or after the text caption is sent to a user), it would have</p>

Claim of the '801 Patent	Engelke 2 in view of Cervantes
	<p>been obvious to try substituting the solution of Cervantes for the teachings of the Engelke references, with a reasonable expectation of success.</p> <p>In addition, Cervantes teaches that prior correction methods displayed corrected text on a target device as a new message instead of as in-line corrected text within the originally transmitted text block. Cervantes recognizes that the prior art solution required a user of the target device to return to an original received block of text and read the text again along with the new corrected text in order to understand the correction. (UTI00002109 at 2:29-31 and UTI00002107 at FIG. 2). In other words, Cervantes recognizes and addresses the same problem subsequently described in the '801 Patent at col. 1, lines 49-64. Thus, one skilled in the art would have understood that Cervantes' text correction solution (which is essentially the same technique as disclosed in the '801 Patent) is an obvious design choice for error correction in transmitted text conversations such as in the Engelke references.</p> <p>The CapTel® Newsletter (UTI00002111-2114) supports the combination of Cervantes and Engelke 2, and further establishes that the practice of distinguishing or "indicating" corrected text was known in the art. In the CapTel® Newsletter, after an incorrect word is transmitted and displayed to an AU, when the error is <u>later</u> identified, the "captioning service will display the correct word in brackets shortly after the error occurs." Thus, it would have been even further obvious to one of ordinary skill in the art to use an error correction solution such as described in Cervantes (or the CapTel® Newsletter) to yield a predictable result (<i>e.g.</i>, indicating an in-line correction of previously transmitted erroneous text using highlighting or brackets).</p>
indicating that the corrected block of text replaced the at least one block of text.	Cervantes teaches that when an edited block of text is displayed, the corrected text can be indicated as "highlighted, colored, underlined (320), or otherwise re-formatted for the purpose of notification." (UTI00002109 at 2:45-50 and UTI00002108 at FIG. 3). And, as noted above, the CapTel® Newsletter discloses that corrections in a text caption may be indicated using brackets. (UTI00002112).
26. The method of claim	Cervantes teaches that when an edited block of text is

Claim of the '801 Patent	Engelke 2 in view of Cervantes
25, wherein indicating that the corrected block of text replaced the at least one block of text includes highlighting the corrected block of text within the text caption.	<p>displayed, the corrected text in such block can be “highlighted, colored, underlined (320), or otherwise re-formatted for the purpose of notification.” (UTI00002109 at 2:45-50 and UTI00002108 at FIG. 3).</p> <p>For the reasons discussed above with respect to Claim 25, it would have been obvious to substitute the error correction solution of Cervantes, including the feature of highlighting corrected text, into the system of Engelke 1 and Engelke 2.</p>
27. The method of claim 25, further comprising: receiving the voice signal first by the communication device;	Engelke 1 and Engelke 2 describe systems configured as set forth in Claim 27. For example, Engelke 2 teaches a computer 14 that operates as an AU's communication device and receives a voice signal of a HU from phone 28 via handset 46. (UTI00002101 at 5:16-20).
transmitting the voice signal to a relay service for generating the text transcription of the voice signal;	Engelke 2 teaches that the AU's computer 14 transmits the voice signal to a relay 56 for generating a text transcription of the voice signal. (UTI00002101 at 5:19-30, 5:37-42, and 6:1-4).
receiving the text transcription from the relay service and displaying the text caption in response thereto; and	Engelke 2 teaches that relay 56 transmits the text transcription to the AU's computer 14 and that the transcription is then displayed via an AU's display 16 via a text box 92. (UTI00002096 at FIG. 7, and UTI00002101 at 5:28-30, and 6:59-64).
receiving the corrected block of text from the relay service and displaying the corrected block of text within the text caption in response thereto.	<p>Cervantes discloses that the corrected block of text is received at the recipient's device, and replaces the original, erroneous block of text in the display of the recipient's electronic device at the same location at which the original erroneous block of text had appeared. (UTI00002109 at 2:29-31 and UTI00002107 at FIG. 2).</p> <p>For the reasons discussed above with respect to Claim 25, it would have been obvious to substitute the error correction solution of Cervantes, including the feature of displaying the corrected text block as replacement text in the text caption, into the system of Engelke 1 and Engelke 2.</p>
28. The method of claim 25, wherein the corrected block of text is selected from the group consisting of at least one word, at least one sentence, and at least one line of text.	<p>Engelke 1 teaches that the CA can select complete words on the CA display 48 to be corrected. (UTI00002080 at 6:13-25).</p> <p>Cervantes also teaches that corrected text may include a single word. For example, FIG. 3 of Cervantes shows a</p>

Claim of the '801 Patent	Engelke 2 in view of Cervantes
	<p>complete underlined word that had been corrected.</p> <p>For the reasons discussed above with respect to Claim 25, it would have been obvious to substitute the error correction solution of Cervantes into the system of Engelke 1 and Engelke 2.</p>
29. A method, comprising:	Engelke 2 teaches a method. (UTI00002101 at 5:25-30).
displaying a text caption on a communication device, the text caption corresponding to a text transcription of at least a portion of a voice signal of a conversation between at least two parties;	<p>Engelke 1 teaches that the voice of a hearing user (HU) is provided to a relay 10 and is transcribed at the relay to a text caption 20 that is displayed to an AU 14 on a communication device 22. (UTI00002073-2074 at FIG. 1, FIG. 3, UTI00002078-2080 2:66-3:5, 3:34-46, and 5:39-56).</p> <p>Engelke 2 also teaches the generation of a text caption from a voice signal by means of transcription. (UTI00002101 at 5:25-30 (“At the relay service 56, the encoded voice signals may be converted back to an analog signal for transcription by a call assistant who produces corresponding captioning text 55 that may be relayed through conventional Internet transfer protocols back to the computer 14 where the text may be displayed.”)).</p>
replacing at least one block of text of the text caption with a corrected block of text;	<p>In the error correction solution of Engelke 1 and Engelke 2, a text caption is transmitted from the relay to an AU's device after error correction has already been performed by the CA on the text caption.</p> <p>Cervantes, however, teaches an IM system wherein a block of text (<i>see, e.g.</i>, UTI00002106 at FIG. 1) is transmitted to a target user's device after the block of text is typed. (UTI00002109 at 2:17-21). When a previously transmitted block includes an error, the sending user can edit the block and transmit the corrected text block (<i>see, e.g.</i>, UTI00002108 at FIG. 3) to the target user's device to replace the previously transmitted block having the error. (UTI00002109 at 2:21-24, 2:39-49, 2:56-65 (“The other chat users would automatically see these changes in . . . the previous message they had received. The changed message is displayed as an edited previously-received message.”), and UTI00002110 at 3:7-14).</p> <p>Using the error correction solution of Cervantes in the system of Engelke 1 and Engelke 2 would result in the claimed subject matter. Specifically, the CA would transmit a corrected block of text after the raw text caption from the</p>

Claim of the '801 Patent	Engelke 2 in view of Cervantes
	<p>voice recognition software had already been sent to the AU's device. Per the teachings of both Cervantes and Engelke 1 the corrected block of text would replace the erroneous block of text at a proper location as originally produced in the transcription of the voice conversation between the HU and AU. (See, e.g., UTI00002080 at 6:26-34 ("The mapping of words to spatial locations by the [CA's display] window 112 allows the [erroneous] word to be quickly identified and replaced while it is being dynamically moved through the queue according to its assigned aging.")).</p> <p><i>Rationale for Obviousness:</i></p> <p>Engelke 1 & 2 teaches a text caption error correction solution for use in an TRS system, which may include an IM box for displaying the captioning, in which the relay 56 corrects errors in the text caption <u>before</u> the text caption is sent to the AU's device 14. Cervantes teaches an alternative text caption error correction solution for use in an IM system in which errors in the text caption are corrected <u>after</u> the text caption has been sent to the recipient. It would have been obvious to one of ordinary skill in the art to substitute the error correction solution of Cervantes (one known element) for the error correction solution of Engelke 2 (another known element) to yield a predictable result (e.g., in-line correction of previously transmitted erroneous text). By combining the software programs of Cervantes and Engelke 2, the unedited text caption in the system of Engelke 2 could be sent directly from the relay 56 to the text caption window 60 on the AU's device 14 and then error corrections could be transmitted by the relay 56 afterward (i.e., in the manner taught by Cervantes), so that the AU could see the text caption faster by not having to wait for corrections to be made. Furthermore, given that the two solutions of Engelke 2 and Cervantes are two of a finite number of concepts for displaying error corrections in transmitted text conversations (errors can either be corrected before or after the text caption is sent to a user), it would have been obvious to try substituting the solution of Cervantes for the teachings of the Engelke references, with a reasonable expectation of success.</p> <p>In addition, Cervantes teaches that prior correction methods displayed corrected text on a target device as a new message</p>

Claim of the '801 Patent	Engelke 2 in view of Cervantes
	<p>instead of as in-line corrected text within the originally transmitted text block. <i>See, e.g.</i>, UTI00002107 at FIG. 2. Cervantes recognizes that the prior art solution required a user of the target device to return to an original received block of text and read the text again along with the new corrected text in order to understand the correction. (UTI00002109 at 2:29-31 and UTI00002107 at FIG. 2). In other words, Cervantes recognizes and addresses the same problem subsequently described in the '801 Patent at col. 1, lines 49-64. Thus, one skilled in the art would have understood that Cervantes' text correction solution (which is essentially the same technique as disclosed in the '801 Patent) is an obvious design choice for error correction in transmitted text conversations such as in the Engelke references.</p>
displaying the corrected block of text within the text caption as an inline correction during the conversation, such that the corrected block of text appears within the text caption in a proper location as produced in the voice signal,	<p>In Cervantes, the text conversation is first transmitted from the sending user's device to the target user's device. <i>See, e.g.</i>, UTI00002105 at Abstract. Then, if the sending user later notices an error during the conversation, a corrected block of text can be transmitted from the sending user's device to the target user's device to replace the previously sent and erroneous block of text as an inline correction at the same location at which the erroneous block of text had appeared on the target user's display. (<i>See, e.g.</i>, UTI00002108 at FIG. 3 and UTI00002105 at Abstract).</p>
wherein replacing at least one block of text with a corrected block of text and displaying the corrected block of text within the text caption occur at least substantially simultaneously; and	<p>Cervantes teaches that after text is corrected on the sending user's device, the sending user only has to select an ENTER function to cause the corrected block of text to replace the erroneous text in the text conversation and immediately be sent to the target user's device and to be used by the such device to correct the error in the already-displayed text caption. (UTI00002109 at 1:50-53).</p>
indicating that the corrected block of text replaced the block of text.	<p>Cervantes teaches that when an edited block of text is displayed, the corrected text can be indicated as "highlighted, colored, underlined (320), or otherwise re-formatted for the purpose of notification. (UTI00002109 at 2:45-50 and FIG. 3).</p> <p>The CapTel® Newsletter (UTI00002111-2114) supports the combination of Cervantes and Engelke 2, and further establishes that the practice of distinguishing or "indicating" corrected text was known in the art. In the CapTel® Newsletter, after an incorrect word is transmitted and displayed to an AU, when the error is later identified, the</p>

Claim of the '801 Patent	Engelke 2 in view of Cervantes
	“captioning service will display the correct word in brackets shortly after the error occurs.” Thus, it would have been even further obvious to one of ordinary skill in the art to use an error correction solution such as described in Cervantes (or the CapTel® Newsletter) to yield a predictable result (e.g., indicating an in-line correction of previously transmitted erroneous text using highlighting or brackets).

2. THE COMBINATION OF RYAN AND CERVANTES RENDERS CLAIMS 3-6, AND 8 OF THE '801 PATENT OBVIOUS.

a. OVERVIEW.

As noted above, it is my opinion that the Ryan reference anticipates a number of the asserted claims. In the alternative, in my opinion those claims are obvious in light of Ryan and the other prior art, including Cervantes. So there is no confusion, I incorporate my discussion of Ryan and Cervantes above as if set forth in full below. My opinions below are in addition to and/or alternative to the other opinions in this report.

Based on my review of Ryan, Cervantes, and the '801 Patent, it is my opinion that the Ryan reference in combination with Cervantes renders at least Claims 3-6, and 8 of the '801 Patent obvious and therefore invalid. Ryan and Cervantes both describe error correction display methods used in a text transmission systems (Ryan a TRS system and Cervantes an IM system) and it would be obvious to a person of ordinary skill in the art to simply substitute the error correction solution of Cervantes for the error correction solution of Ryan.

Ryan discloses a relay operation wherein errors may be corrected by either manually entering the correction or having a computer program automatically correct errors when the block of text is in the computer buffer. Ryan discloses a program in the TRS system that looks for misspelled words and if a misspelled word is detected, automatically replaces the text word

with a corrected text word. In Ryan, the error correction is done before the block of text is transmitted to a hard-of-hearing user's device. Therefore, the hard-of-hearing user only reads the corrected text and does not realize that errors were previously detected and replaced. The error correction performed automatically in the buffer tags corrected words by highlighting them. The tagging gives the call assistant the ability to see what corrections have been made. Therefore, the concept of tagging was used in a relay operation well before the priority date of the '801 Patent. Displaying the tagging at the call assistant's computer or transmitting the tagging to the hard-of-hearing user's display was only a design choice and would have been very easy to reprogram at the time of the alleged invention claimed in the '801 Patent.

As discussed previously, the Cervantes reference discloses an instant messaging ("IM") system that performs error corrections. The Cervantes reference shows that a first user sends a first IM text to a second user. The first user identifies any errors in the first IM text. Then, the first user manually corrects the first IM text and transmits this second generated corrected IM text to the second user. The second IM text (corrected text) replaces the first IM text on the second user's device (as well as the first user's device). The corrected words are tagged (i.e., by highlighting or underlining) so that the second user can easily identify the corrected portion of the IM text.

Therefore, Ryan teaches an error correction solution for use in relay operations where the corrections are performed before transmitting the text to the hard-of-hearing user's device and Cervantes teaches an alternative error correction solution for use in an IM system in which errors in the text caption are corrected after the uncorrected text caption has been sent to the recipient.

b. RATIONALE TO COMBINE REFERENCES.

As relevant to the claims of the '801 Patent, Ryan teaches a TRS system. I incorporate my statements regarding why a person of ordinary skill in the art would look to a references in the TRS field as well as other fields, such as instant messaging, above. Thus, for the same reasons (stated above in Section II(B)(1)) that it would have been obvious to modify Engelke 2 to include the method of displaying error corrections taught by Cervantes, it would also have been obvious to modify Ryan to include the method of Cervantes.

c. INVALIDITY CHART.

Below is a chart of how Ryan (UTI00002083-90) in view of Cervantes (UTI00002105-10) renders obvious Claims 3-6, and 8 of the '801 Patent. I have interpreted the claim elements by giving them their ordinary meaning, unless specifically stated otherwise. I incorporate my discussion of Ryan and Cervantes above, as if set forth in full.

Claim of the '801 Patent	Ryan in view of Cervantes
3. The method of claim 1, further comprising generating the another block of text with a first device and	As discussed above in Section II(A)(4)(b), Ryan discloses each and every limitation of Claim 1 of the '801 Patent. In particular, Ryan teaches a method in which the relay agent can make manual changes to the transcribed text displayed on the terminal monitor 24 while the text is still in the edit text buffer. (UTI00002088 at 5:36-44). Ryan also teaches that the software monitors text in the transmit text buffer during the conversation and, when a misspelled word is identified, corrects the word. (UTI00002088 at 6:16-30). These corrections and corrected words comprise "the another block of text," and are generated at the relay 10 (<i>i.e.</i> , the "first device") of the system of Ryan.
transmitting the another block of text to the at least one electronic device.	Cervantes teaches an Instant Message (IM) system wherein a block of text (<i>see, e.g.</i> , UTI00002106 at FIG. 1) is generated at a first device and transmitted to a target user's device (the "at least one electronic device") after the block of text is typed. (UTI00002109 at 2:17-21). When a previously transmitted block includes an error, the sending user can edit the block on his or her device (<i>i.e.</i> , the "first device")

Claim of the '801 Patent	Ryan in view of Cervantes
	<p>and transmit the corrected text block (<i>see, e.g.</i>, UTI00002108 at FIG. 3) to the target user's device (<i>i.e.</i>, the "at least one electronic device") to replace the previously transmitted block having the error. (UTI00002109 at 2:21-24, 2:39-49, 2:56-65 ("The other chat users would automatically see these changes in . . . the previous message they had received . . . The changed message is displayed . . . as an edited previously-received message"), and UTI00002110 at 3:7-14).</p> <p><i>Rationale for Obviousness:</i></p> <p>Ryan teaches a text caption error correction display solution in which errors in the text caption are corrected <u>before</u> the text caption is sent to the recipient, while Cervantes teaches an alternative text caption error correction solution in which errors in the text caption are corrected <u>after</u> the text caption has been sent to the recipient. It would have been obvious to one of ordinary skill in the art to substitute the error correction solution of Cervantes (one known element) for the error correction solution of Ryan (another known element) to yield a predictable result (<i>e.g.</i>, inline correction of previously transmitted erroneous text). Furthermore, given that the two solutions are two of a finite number of concepts for displaying error corrections in transmitted text conversations (errors can either be corrected before or after the text caption is sent to a user), it would have been obvious to try substituting the solution of Cervantes for the teachings of Ryan, with a reasonable expectation of success. For example, the automatic misspelling correction provided by the software in Ryan could operate on text that has already been transmitted, rather than on text that is waiting to be transmitted in the transmit text buffer.</p> <p>In addition, Cervantes teaches that prior correction methods displayed corrected text on a target device as a new message instead of as in-line corrected text within the originally transmitted text block. <i>See, e.g.</i>, UTI00002107 at FIG. 2. Cervantes recognizes that the prior art solution required a user of the target device to return to an original received block of text and read the text again along with the new corrected text in order to understand the correction. (UTI00002109 at 2:29-31 and FIG. 2). In other words,</p>

Claim of the '801 Patent	Ryan in view of Cervantes
	Cervantes recognizes and addresses the same problem subsequently described in the '801 Patent at col. 1, lines 49-64. Thus, one skilled in the art would have understood that Cervantes' text correction solution (which is essentially the same technique as disclosed in the '801 Patent) is an obvious design choice for error correction in transmitted text conversations such as in the Ryan reference.
4. The method of claim 3, wherein generating another block of text comprises: identifying one or more errors within the first block of text of the text caption; and	Ryan teaches that the relay agent can watch the text transcription as it is generated and identify errors, in order to make manual changes to the transcribed text displayed on the terminal monitor 24 while the text is still in the edit text buffer. (UTI00002088 at 5:36-44). Ryan also teaches that the relay's software monitors text in the transmit text buffer during the conversation and identifies common misspellings. (UTI00002088 at 6:16-30).
generating the another block of text including the first block of text of the text caption having each of the one or more errors replaced with corrected text within the text caption.	<p>Cervantes teaches that when the sending user identifies an error in a text message the user previously sent from the sending user's device (<i>i.e.</i>, the "first device"), the user can directly edit the text message in appear in the text conversation on the user's device to generate a corrected block of text that includes corrected text as well as other text that was originally correct. (UTI00002109 at 2:51-60; <i>compare</i> UTI00002106 at FIG. 1 <i>with</i> UTI00002108 at FIG. 3).</p> <p>For the reasons discussed above with respect to Claim 3, it would have been obvious to substitute the error correction solution of Cervantes into the system of Ryan.</p>
5. The method of claim 4, wherein displaying the another block of text further comprises tagging the corrected text within the text caption.	<p>Cervantes teaches that when an edited block of text is displayed, the corrected text can be "highlighted, colored, underlined (320), or otherwise re-formatted for the purpose of notification." (UTI00002109 at 2:45-50 and UTI00002108 at FIG. 3).</p> <p>For the reasons discussed above with respect to Claim 3, it would have been obvious to substitute the error correction solution of Cervantes, including the feature of tagging corrected text, into the system of Ryan.</p>
6. The method of claim 5, wherein tagging the corrected text comprises highlighting the	Cervantes teaches that when an edited block of text is displayed, the corrected text in such block can be "highlighted, colored, underlined (320), or otherwise re-

Claim of the '801 Patent	Ryan in view of Cervantes
corrected text within the text caption.	<p>formatted for the purpose of notification.” (UTI00002109 at 2:45-50 and UTI00002108 at FIG. 3).</p> <p>For the reasons discussed above with respect to Claim 3, it would have been obvious to substitute the error correction solution of Cervantes, including the feature of highlighting corrected text, into the system of Ryan.</p>
<p>8. The method of claim 1, further comprising generating the text caption on a first device and</p>	<p>As discussed above, Ryan teaches that, in one embodiment, a relay agent working at a relay 10 (<i>i.e.</i>, a first device) receives a voice signal from a person using a phone 14 via agent device 20 and transcribes a caption corresponding to the voice via keyboard 26. (UTI00002087 at 4:19-24).</p> <p>Cervantes also describes a system in which a text conversation is generated at a sending user’s device (<i>i.e.</i>, a “first device”) when the sending user types his or her message. (UTI00002106 at FIG. 1 and UTI00002109 at 2:20-21).</p>
transmitting the text caption to the at least one electronic device.	<p>In Cervantes, the text message is transmitted to a receiving user’s device (<i>i.e.</i>, “at least one electronic device”) and displayed for the receiving user. (UTI00002106 at FIG. 1 and UTI00002109 at 1:41-49).</p> <p>For the reasons discussed above with respect to Claim 3, it would have been obvious to substitute the error correction solution of Cervantes into the system of Ryan.</p>

3. THE COMINBATION OF THE BRIDGE VIDEO PUBLICATION AND CERVANTES RENDERS CLAIMS 5, 6, 10-12, 15, 16, 25, 26, 28, AND 29 OF THE '801 PATENT OBVIOUS.

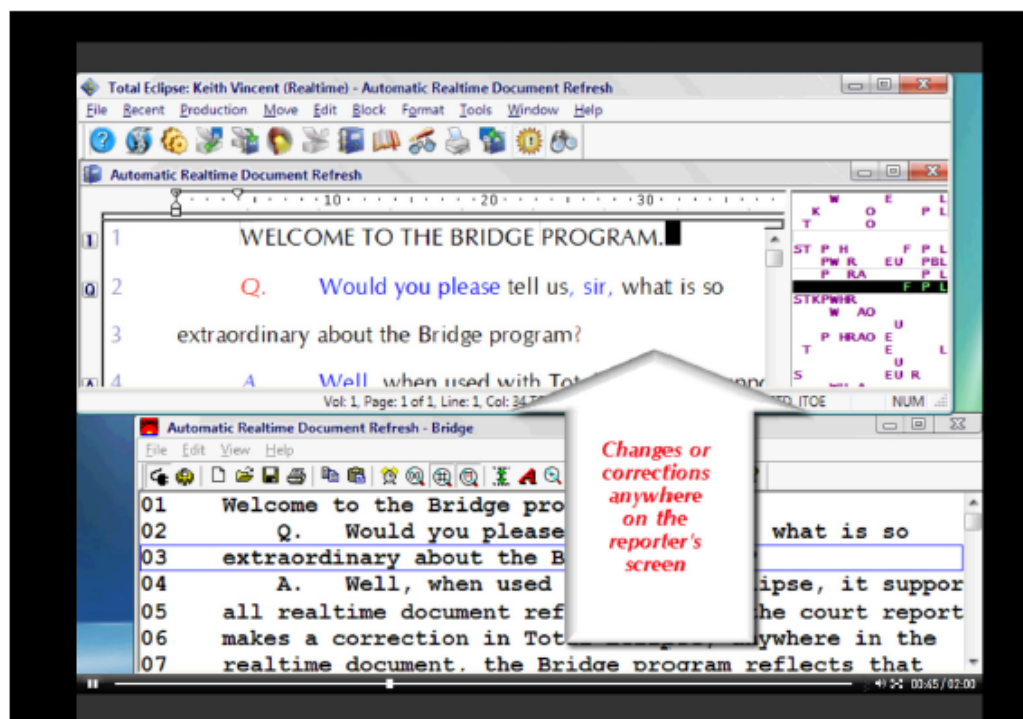
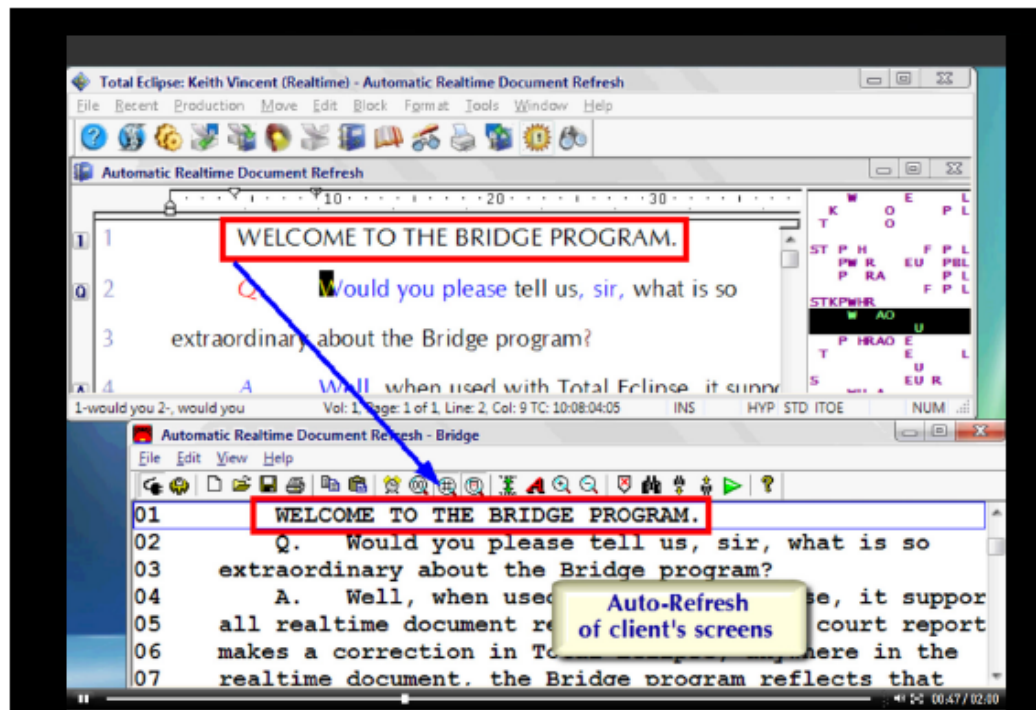
a. OVERVIEW.

As noted above, it is my opinion that the Bridge Video Publication reference anticipates a most of the asserted claims. In the alternative, in my opinion those patent claims are obvious in light of the Bridge Video Publication and the other prior art, including Cervantes. So there is no confusion, I incorporate my discussion of the Bridge Video Publication and Cervantes above,

including the charts, as if set forth in full below. My opinions below are in addition to and/or alternative to the other opinions in this report.

Based on my review of the Bridge Video Publication, Cervantes, and the '801 Patent, it is my opinion that the Bridge Video Publication in combination with Cervantes further renders at least Claims 5, 6, 10-12, 15, 16, 25, 26, 28, and 29 of the '801 Patent obvious and therefore invalid. Both the Bridge Video Publication and Cervantes describe error correction display methods used in text transmission systems (Bridge Video in a court reporter's program and Cervantes in an instant messaging context) and it would have been obvious at the time of the purported invention to a person of ordinary skill in the art to simply substitute the method of displaying error corrections described in Cervantes into the transcription system of the Bridge Video Publication.

The Bridge Video Publication discloses a "real-time" court reporter software program that allows for error correction. The court reporter program transcribes the witness' testimony, creating a first block of text, and displays this first block of text on the electronic device of the court reporter's client ("client"). When a court reporter identifies an error in the first block of text, the court reporter corrects the error which generates a corrected block of text. The Bridge Video Publication further discloses an Auto-Refresh protocol that automatically transmits the corrected block of text to the client's device and the corrected block of text replaces the first block of text. The corrected block of text is displayed on both the client's device and the court reporter's computer screen. Below are some images from the Bridge Video Publication.



The Cervantes reference discloses an instant messaging (“IM”) system that performs error corrections. The Cervantes reference shows that a first user sends a first IM text to a

second user. The first user identifies any errors in the first IM text. Then, the first user manually corrects the first IM text and transmits this second generated corrected IM text to the second user. The second IM text (corrected text) replaces the first IM text on the second user's device (as well as the first user's device). The corrected words are tagged (i.e., by highlighting or underlining) so that the second user can easily identify the corrected portion of the IM text. Again, below is Figure 3 from the Cervantes reference that shows how the corrections are tagged in the instant message that replaces the first instant message.

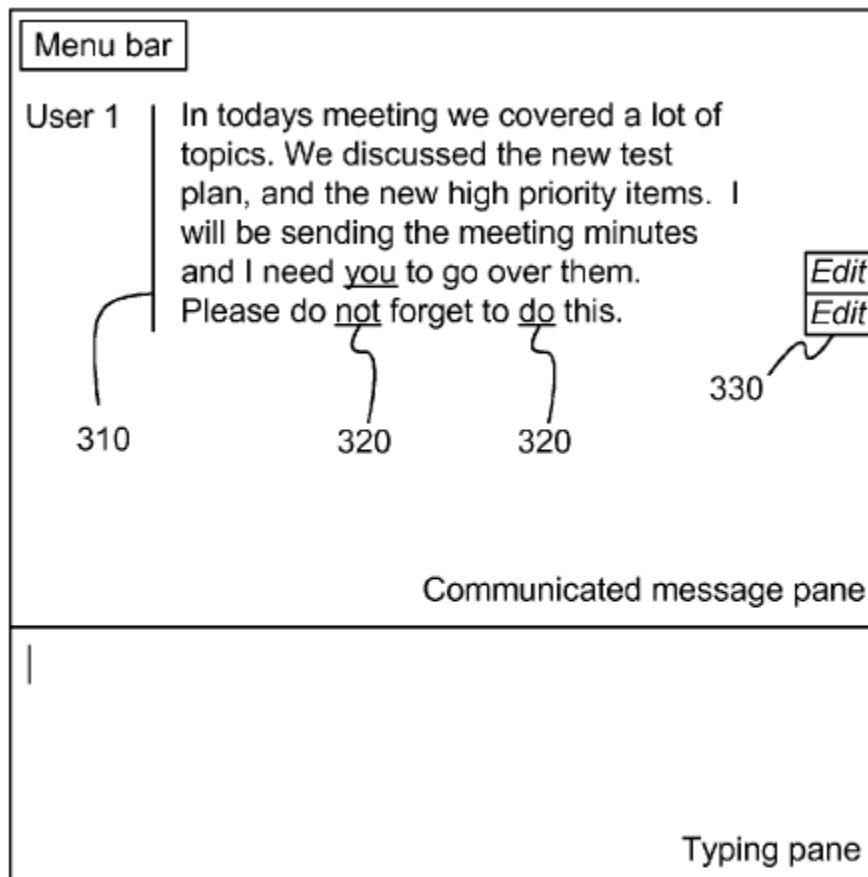


FIG 3

In summary, both the Bridge Video Publication and Cervantes teach transmitting an uncorrected block of transcribed text to another user. Both the sending and receiving user can view the uncorrected text on their screen. In addition, both references teach that the sending user identifies an error in the uncorrected block of text and then uses some error correction method to correct those errors. Both references further disclose that a corrected block of text is created after correcting the errors and the corrected text is transmitted to the receiving user. These references further show replacing the previously transmitted first block of uncorrected text with the subsequently transmitted second block of corrected text. Therefore, both the Bridge Video Publication and Cervantes address the issue of error correction in very similar ways and have the same goals. Cervantes, however, further discloses the feature of tagging the corrected text so the receiving user can easily identify where and what text was corrected. A person of ordinary skill in the art would look at both references to add in-line error corrections (with tagging) into a TRS system as described in the '801 Patent.

b. RATIONALE TO COMBINE REFERENCES

Again, I incorporate my discussion from the sections above regarding why a person of ordinary skill in the art would have been motivated to combine the prior art references discussed in my report. With respect to the Bridge Video Publication and Cervantes, it would have been obvious to a person of ordinary skill in the art to modify a real-time transcription application such as disclosed in the Bridge Video Publication to use some form of highlighting or tagging, such as taught by Cervantes and claimed in the '801 Patent, to visually indicate to a user (e.g., a lawyer or judge) that a correction was made because (1) both the Bridge Video Publication and Cervantes are systems for transmitting a text stream representing a real time conversation to users' displays, and as noted above, it is routine for software engineers to look to across fields

for ideas on how to display corrections in a text stream, (2) the Bridge Video Publication and Cervantes address the same problem in very similar ways (i.e., they both advocate sending uncorrected text right away, then later correcting that text if need be) and have the same goals; (3) adding the highlighting feature of Cervantes to the program disclosed in the Bridge Video Publication would constitute nothing more than combining known features or their known purposes, to yield a predictable result; and (4) it would be common sense to use some kind of visual indication to a user that a correction was made. As to this last point, the Bridge Video Publication indicates the importance of having an accurate transcript. It is my understanding that during a legal proceeding, parts of the transcript might be read back to a witness. Especially in that type of situation, it is common sense that it would be important to notify the person reading the transcript that a correction was made so, e.g., the person could re-read the corrected transcript. I note again the similarities in Figure 3 from the Cervantes reference and Figures 3-5 from the '801 Patent as to the tagging/highlighting of the corrected text. There was nothing new or non-obvious at the time of the purported invention in the '801 Patent about the ways that the various claims use to indicate or the corrected text.

c. INVALIDITY CHART

Below is a chart of how the Bridge Video Publication (UTI00002052-71) and Cervantes (UTI00002105-10) renders obvious at least Claims 5-6, 10-12, 15, 16, 25, 26, 28, and 29 of the '801 Patent. I have interpreted the claim elements by giving them their ordinary meaning, unless specifically stated otherwise. Again, I incorporate my discussion of the Bridge Video Publication and Cervantes reference above.

Claim of the '801 Patent	The Bridge Video Publication in view of Cervantes
5. The method of claim 4, wherein displaying the another	As discussed above with respect to Section II(A)(2)(b), the Bridge Video Publication discloses all elements of Claims

Claim of the '801 Patent	The Bridge Video Publication in view of Cervantes
<p>block of text further comprises tagging the corrected text within the text caption.</p>	<p>1-4 of the '801 Patent.</p> <p>Cervantes further teaches that when an edited block of text is displayed, the corrected text can be “highlighted, colored, underlined (320), or otherwise re-formatted for the purpose of notification.” (UTI00002109 at 2:45-50 and UTI00002108 at FIG. 3).</p> <p><i>Rationale for Obviousness</i></p> <p>The Bridge Video Publication and Cervantes are both directed to providing systems for efficiently communicating a text stream representing a real time conversation to multiple users’ displays. The Bridge Video Publication expressly recognizes the importance of “real-time” transcription (<i>see, e.g.</i>, UTI00002060), but also the importance of ensuring accuracy in the transcription (<i>see, e.g.</i>, UTI00002054 (“The next step was to take the rough out of rough draft”).</p> <p>Both the Bridge Video Publication and Cervantes approach these two goals by first having the user that is typing the text conversation send the text conversation immediately to another user to view in real time, even if a few errors exist. Then, the sending user in both the Bridge Video Publication and Cervantes can view the text block they just sent on their own displays and, if they identify errors, can directly edit the already-sent text block, which then is re-transmitted to the sending user to replace the previously-sent text block. In short, the Bridge Video Publication and Cervantes address the same problem in very similar ways and have the same goals.</p> <p>While a person viewing the corrected text in the Bridge Video Publication would know what text was corrected by virtue of a “tag” or indicator, Cervantes also discloses the feature of tagging or highlighting text that was just corrected for the purpose of notifying the recipient that an error existed, but was corrected. (<i>See, e.g.</i>, UTI00002109 at 2:45-50). For the same reason that it would be desirable to notify the recipient of an error having been corrected in the IM system, it would be equally or more desirable to notify a judge or attorney reading the real time transcript of a proceeding that an error had just been corrected in the</p>

Claim of the '801 Patent	The Bridge Video Publication in view of Cervantes
	<p>transcript.</p> <p>Thus, it would have been obvious to one of ordinary skill in the art to combine the highlighting feature of Cervantes with the voice transcription correction process of the Bridge Video Publication, as such combination would involve nothing more than the addition of a known feature (highlighting) to perform a known task in substantially the same system. Given the similarity in how the systems of the Bridge Video Publication and Cervantes are configured (e.g., error correction being performed after a text block has already been sent to a recipient), the result of such combination would be predictable.</p>
<p>6. The method of claim 5, wherein tagging the corrected text comprises highlighting the corrected text within the text caption.</p>	<p>While a person viewing the corrected text in the Bridge Video Publication would know what text was corrected by virtue of a "tag" or indicator, Cervantes further teaches that when an edited block of text is displayed, the corrected text can be "highlighted, colored, underlined (320), or otherwise re-formatted for the purpose of notification." (UTI00002109 at 2:45-50 and UTI00002108 at FIG. 3).</p> <p>For the reasons discussed above with respect to Claim 5, it would have been obvious to combine the error correction features of Cervantes, which includes highlighting corrected text on a recipient's screen, into the system of the Bridge Video Publication.</p>
<p>10. The communication system of claim 9, wherein the at least one application program is further configured to tag at least one word of the another block of text within the text caption as a corrected word.</p>	<p>As discussed above with respect to Section II(A)(2)(b), the Bridge Video Publication discloses all elements of Claim 9 of the '801 Patent.</p> <p>While a person viewing the corrected text in the Bridge Video Publication would know what text was corrected by virtue of a "tag" or indicator, Cervantes further teaches that when an edited block of text is displayed, the corrected word(s) can be "highlighted, colored, underlined (320), or otherwise re-formatted for the purpose of notification." (UTI00002109 at 2:45-50 and UTI00002108 at FIG. 3).</p> <p>For the reasons discussed above with respect to Claim 5, it would have been obvious to combine the error correction features of Cervantes, which includes highlighting or "tagging" corrected word(s) on a recipient's screen, into the system of the Bridge Video Publication.</p>

Claim of the '801 Patent	The Bridge Video Publication in view of Cervantes
<p>11. The communication system of claim 9, wherein the at least one application program is further configured to display at least one word within the text caption having the one or more blocks of text of the text caption replaced by the another block of text as highlighted.</p>	<p>While a person viewing the corrected text in the Bridge Video Publication would know what text was corrected by virtue of an indicator that highlights the change, Cervantes further teaches that when an edited block of text is displayed, the corrected word(s) can be “highlighted, colored, underlined (320), or otherwise re-formatted for the purpose of notification.” (UTI00002109 at 2:45-50 and UTI00002108 at FIG. 3).</p> <p>For the reasons discussed above with respect to Claim 5, it would have been obvious to combine the error correction features of Cervantes, which includes highlighting corrected word(s) on a recipient’s screen, into the system of the Bridge Video Publication.</p>
<p>12. The communication system of claim 9, wherein a highlighted word is indicative of a corrected word.</p>	<p>While a person viewing the corrected text in the Bridge Video Publication would know what text was corrected by virtue of an indicator that highlights the change, Cervantes further teaches that when an edited block of text is displayed, the corrected word(s) can be “highlighted, colored, underlined (320), or otherwise re-formatted <u>for the purpose of notification.</u>” (UTI00002109 at 2:45-50 and UTI00002108 at FIG. 3).</p> <p>For the reasons discussed above with respect to Claim 5, it would have been obvious to combine the error correction features of Cervantes, which includes highlighting corrected word(s) on a recipient’s screen, into the system of the Bridge Video Publication.</p>
<p>15. The computer-readable media storage medium of claim 14, wherein displaying the another block of text within the text caption includes identifying at least one word within the another block of text with a tag.</p>	<p>As discussed above with respect to Section II(A)(2)(b), the Bridge Video Publication discloses all elements of Claim 14 of the '801 Patent.</p> <p>While a person viewing the corrected text in the Bridge Video Publication would know what text was corrected by virtue of a "tag" or indicator, Cervantes further teaches that when an edited block of text is displayed, the corrected word(s) can be “highlighted, colored, underlined (320), or otherwise re-formatted for the purpose of notification.” (UTI00002109 at 2:45-50 and UTI00002108 at FIG. 3).</p> <p>For the reasons discussed above with respect to Claim 5, it would have been obvious to combine the error correction features of Cervantes, which includes highlighting or</p>

Claim of the '801 Patent	The Bridge Video Publication in view of Cervantes
	“tagging” corrected word(s) on a recipient’s screen, into the system of the Bridge Video Publication.
<p>16. The computer- readable media storage medium of claim 15, wherein identifying at least one word within the another block of text with a tag comprises highlighting the at least one word.</p>	<p>While a person viewing the corrected text in the Bridge Video Publication would know what text was corrected by virtue of an indicator that highlights the change, Cervantes further teaches that when an edited block of text is displayed, the corrected word(s) can be “highlighted, colored, underlined (320), or otherwise re-formatted for the purpose of notification.” (UTI00002109 at 2:45-50 and UTI00002108 at FIG. 3).</p> <p>For the reasons discussed above with respect to Claim 5, it would have been obvious to combine the error correction features of Cervantes, which includes highlighting corrected word(s) on a recipient’s screen, into the system of the Bridge Video Publication.</p>
25. A method, comprising:	The Bridge Video Publication discloses a method. (UTI00002052-2060).
displaying a text caption on a communication device, the text caption corresponding to a text transcription of at least a portion of a voice signal of a conversation between at least two parties;	The Bridge Video Publication discloses displaying a text caption on a court reporter/transcriptionist’s computer screen (<i>i.e.</i> , the top window entitled “Automatic Realtime Document Refresh”) and on a client’s computer screen (<i>i.e.</i> , the bottom window entitled “Bridge”), the text caption being a direct transcription of a voice conversation between at least two individuals (<i>e.g.</i> , an attorney and a witness) heard by the transcriptionist (<i>see, e.g.</i> , the example question and answer illustrated). (UTI00002057-2059).
receiving a corrected block of text for at least one block of text within the text caption;	The Bridge Video Publication discloses that the court reporter can generate and transmit (via the “Bridge Auto-Refresh protocol”) a corrected block of text such that the client’s device receives the corrected block of text in real time. (UTI00002059).
displaying the corrected block of text within the text caption as an inline correction during the conversation, such that the corrected block of text appears within the text caption in place of the at least one block of text; and	The Bridge Video Publication discloses displaying the corrected block of text (<i>i.e.</i> , the all-caps text block “WELCOME TO THE BRIDGE PROGRAM”) on both the court reporter’s screen (<i>see</i> UTI00002058-2059) and on the client’s screen (<i>see</i> UTI00002059) as an “inline” correction—in other words, within the already-displayed transcription at the same location at which the erroneous block of text had been displayed (<i>i.e.</i> , the replacement, all-caps block of text on the client’s screen is located where the original block of text had appeared).

Claim of the '801 Patent	The Bridge Video Publication in view of Cervantes
<p>indicating that the corrected block of text replaced the at least one block of text.</p>	<p>The Bridge Video Publication inherently discloses that the court reporter's computer provides an "indication" to the client computer that the correction was made, in that a data packet or instruction must be sent over the link between the computers telling the client computer to display the correction, or the client computer would not refresh the screen to show the corrected text.</p> <p>To the extent the Bridge Video Publication does not teach the "indicating" step (and thus does not anticipate), Cervantes further teaches that when an edited block of text is displayed, the corrected text can be "highlighted, colored, underlined (320), or otherwise re-formatted for the purpose of notification." (UTI00002109 at 2:45-50 and UTI00002108 at FIG. 3). In other words, techniques like highlighting, changing text color, and underlining are used to indicate to the recipient of the text block that an error correction was made and where it was made.</p> <p>For the reasons discussed above with respect to Claim 5, it would have been obvious to combine this error correction feature of Cervantes into the system of the Bridge Video Publication.</p>
<p>26. The method of claim 25, wherein indicating that the corrected block of text replaced the at least one block of text includes highlighting the corrected block of text within the text caption.</p>	<p>While a person viewing the corrected text in the Bridge Video Publication would know what text was corrected by virtue of an indicator that highlights the change, Cervantes further teaches that when an edited block of text is displayed, the corrected text can be "highlighted, colored, underlined (320), or otherwise re-formatted for the purpose of notification." (UTI00002109 at 2:45-50 and UTI00002108 at FIG. 3).</p> <p>For the reasons discussed above with respect to Claim 5, it would have been obvious to combine the error correction features of Cervantes, which includes highlighting corrected text on a recipient's screen, into the system of the Bridge Video Publication.</p>
<p>28. The method of claim 25, wherein the corrected block of text is selected from the group consisting of at least one word, at least one sentence, and at least one line of text.</p>	<p>The Bridge Video Publication teaches that the corrected block of text is at least one line of text (<i>e.g.</i>, "WELCOME TO THE BRIDGE PROGRAM"). (<i>See, e.g.</i>, UTI00002059). Cervantes also teaches that the corrected block of text is at least one word (<i>e.g.</i>, "you"). (<i>See, e.g.</i>, UTI00002108 at FIG. 3).</p>

Claim of the '801 Patent	The Bridge Video Publication in view of Cervantes
29. A method, comprising:	The Bridge Video Publication discloses a method. (UTI00002052-2060).
displaying a text caption on a communication device, the text caption corresponding to a text transcription of at least a portion of a voice signal of a conversation between at least two parties;	The Bridge Video Publication discloses displaying a text caption on a court reporter/transcriptionist's computer screen (<i>i.e.</i> , the top window entitled "Automatic Realtime Document Refresh") and on a client's computer screen (<i>i.e.</i> , the bottom window entitled "Bridge"), the text caption being a direct transcription of a voice conversation between at least two individuals (<i>e.g.</i> , an attorney and a witness) heard by the transcriptionist (<i>see, e.g.</i> , the example question and answer illustrated). (UTI00002057-2059).
replacing at least one block of text of the text caption with a corrected block of text;	The Bridge Video Publication discloses replacing a first block of text (<i>e.g.</i> , "Welcome to the Bridge pro..." shown on the client's screen in UTI00002055-2058) with another block of text (<i>e.g.</i> , the all-caps text block "WELCOME TO THE BRIDGE PROGRAM" shown on the reporter's screen in UTI00002058 during a real-time conversation from which the voice signal is generated). (<i>See, e.g.</i> , UTI00002054-2058). The Bridge Video Publication further discloses that the block of text replacing the first block of text can comprise an error correction. (UTI00002054-2058).
displaying the corrected block of text within the text caption as an inline correction during the conversation, such that the corrected block of text appears within the text caption in a proper location as produced in the voice signal,	The Bridge Video Publication discloses displaying the corrected block of text (<i>i.e.</i> , the all-caps text block "WELCOME TO THE BRIDGE PROGRAM") on both the court reporter's screen (<i>see</i> UTI00002058-2059) and on the client's screen (<i>see</i> UTI00002059) in real time during the conversation as an "inline" correction—in other words, within the already-displayed transcription at the same location at which the erroneous block of text had been displayed (<i>i.e.</i> , the replacement, all-caps block of text on the client's screen is located where the original block of text had appeared).
wherein replacing at least one block of text with a corrected block of text and displaying the corrected block of text within the text caption occur at least substantially simultaneously; and	The Bridge Video Publication discloses that "whenever" the court reporter makes Real Time edits to the text caption on the reporter's screen, such edits are "automatically" implemented on the client's screen via the "Bridge Auto-Refresh protocol." (UTI00002055-2059). The Auto-Refresh is transmitted via typical real-time cables. (UTI00002066).
indicating that the corrected block of text replaced the	The Bridge Video Publication inherently discloses that the court reporter's computer provides an "indication" to the

Claim of the '801 Patent	The Bridge Video Publication in view of Cervantes
block of text.	<p>client computer that the correction was made, in that a data packet or instruction must be sent over the link between the computers telling the client computer to display the correction, or the client computer would not refresh the screen to show the corrected text.</p> <p>To the extent the Bridge Video Publication does not teach the “indicating” step (and thus does not anticipate), Cervantes further teaches that when an edited block of text is displayed, the corrected text can be “highlighted, colored, underlined (320), or otherwise re-formatted for the purpose of notification.” (UTI00002109 at 2:45-50 and UTI00002108 at FIG. 3). In other words, techniques like highlighting, changing text color, and underlining are used to indicate to the recipient of the text block that an error correction was made and where it was made.</p> <p>For the reasons discussed above with respect to Claim 5, it would have been obvious to combine this error correction feature of Cervantes into the system of the Bridge Video Publication.</p>

4. THE COMBINATION OF THE BRIDGE VIDEO PUBLICATION AND ENGELKE 1 RENDERS CLAIMS 19-23 OF THE '801 PATENT OBVIOUS.

a. OVERVIEW.

As noted above, it is my opinion that the Bridge Video Publication and/or the Engelke 1 reference anticipates a most of the asserted claims. In the alternative, in my opinion those patent claims are obvious in light of the Bridge Video Publication and Engelke 1 and the other prior art. So there is no confusion, I incorporate my discussion of the Bridge Video Publication and Engelke 1 above, including the charts, as if set forth in full below. My opinions below are in addition to and/or alternative to the other opinions in this report.

Based on my review of the Bridge Video Publication, Engelke 1, and the '801 Patent, it is my opinion that the Bridge Video Publication in combination with Engelke 1 renders at least

Claims 19-23 of the '801 Patent obvious and therefore invalid. The Bridge Video Publication and Engelke 1 both describe error correction methods used in a real-time transcription system and it would be obvious to a person of ordinary skill in the art to combine these references to arrive at the purported inventions claimed in claims 19-23 of the '801 Patent..

The TRS system disclosed in Engelke 1 is similar to the TRS system disclosed in the '801 Patent (see II(A)(1) for an overview of the '801 Patent). The call assistant receives the spoken words of the hearing user and a voice recognition software application transcribes those words into a first block of text and displays that first block of text caption on the call assistant's device (computer screen). This first block of text is placed in a buffer (temporary storage) until it is transmitted to the hard-of-hearing user's device (captioned phone). While the first block of text is still in the call assistant's buffer, the call assistant may identify and correct any errors before the block of text is transmitted to the hard-of-hearing user's device. The corrected block of text replaces the first uncorrected block of text on the call assistant's device. The call assistant then transmits the corrected block of text from the buffer to the hard-of-hearing user's display. Thus, error correction takes place before any block of text is transmitted to the hard-of-hearing user's device and the hard-of-hearing user only sees the corrected block of text.

The Bridge Video Publication discloses a court reporter software program that uses error correction. The court reporter program transcribes the witness' testimony, creating a first block of text, and displays this first block of text on the electronic device of the court reporter's client ("client"). When a court reporter identifies an error in the first block of text, the court reporter corrects the error which generates a corrected block of text. The Bridge Video Publication further discloses an Auto-Refresh protocol that automatically transmits the corrected block of text to the client's device and the corrected block of text replaces the first block of text. The

corrected block of text is displayed on both the client's device and the court reporter's computer screen.

b. RATIONALE TO COMBINE REFERENCES

Again, I incorporate the rationale I give above as to the reason why a person of ordinary skill in the art would have looked to the teachings of the prior art references cited herein. The combination of the Bridge Video Publication and Engelke 1 renders at least claims 19-23 of the '801 Patent obvious, whether this combination is assessed as being a modification of the program disclosed in the Bridge Video Publication for use in a TRS setting such as disclosed in Engelke 1, or whether the combination is assessed as a modification of a TRS system such as in Engelke 1 to include the error correction functionality of the Bridge Video Publication. In either case, it would have been obvious to a person of ordinary skill in the art to combine the teachings of the Bridge Video Publication (a real-time transcription platform with an "in-line" method of displaying error corrections) with Engelke 1 (a captioned telephone system) because (1) there are only a finite number of ways to introduce or position a corrected word or phrase into a text caption stream in a real-time application; (2) a person of ordinary skill in the art would have looked across different real-time text transmission technologies for ideas on how to introduce and display error corrections and applications of those ideas, including court reporting and TRS; (3) using the manner of displaying error corrections from the Bridge Video Publication in a TRS setting such as Engelke 2 would constitute nothing more than implementing a known feature (in-line display of corrections) with a known system (captioned telephone) to yield a predictable result in which the known feature and known system each still perform the same functions for which they were previously used; and (4) making such a substitution would be a mere matter of

design preference and well within the ability of a person of ordinary skill in the art to easily implement.

First, there are really only a finite number of ways that an error correction (such as a corrected word or phrase) can be introduced into a text stream in terms of how the correction is positioned. Some possibilities include:

- Inserting the correction in place of the incorrect word or phrase before the text is sent to a user (such as shown in Engelke 1);
- Sending uncorrected text right away, then afterward:
 - Re-sending the entire text stream, paragraph, or sentence that contained the error, but now with the correct word or phrase;
 - Appending the corrected word or phrase at the end of the paragraph or sentence that contains the error;
 - Placing the corrected word or phrase on a new line;
 - Inserting the corrected word within a sentence, next to or near the error;
 - Replacing the error with the corrected word or phrase;
 - Displaying the corrected word or phrase in a separate location adjacent to the text stream, and using a comment box or bubble, or a line or arrow, to indicate that the corrected word or phrase applies to a specific part of the text caption.

In my opinion, it would not have taken the average person in this field very long to come up with a list of potential design options such as the above. The concept of how and where to place an error correction is not something particularly complicated, and the potential options do not make an expansive list.

Given the design incentives in the field of captioned telephone service, the limitations inherent in CTS and CTS equipment, and the goals and requirements for how CTS must be provided, a person of ordinary skill in the art tasked with implementing a method of displaying error corrections on a CTS devices would narrow down the already small list of design options to just a few, and would recognize the teachings of the Bridge Video Publication as being attractive for use in a TRS setting. Again, given the relatively small screen size of CTS devices in 2008 and 2009, adopting a method in which error corrections are placed on a new line or in a bubble or comment box adjacent the text stream, and thereby using more screen space, would have been a consideration. Again, below is a photo of the CapTel 800i (obtained from CapTel's website), which was a popular CTS device in 2009, and had either the largest or one of the largest screens available.



Even though considered a large screen, as shown in the picture the screen can only display a handful of lines at a time, and each line generally has only about 7 or 8 words. The CapTel 200, shown below, also demonstrates how captioned phones had limited screen space at the time.



As another example of a design incentive that would guide the error correction decision, it has been a goal of CTS providers to try to have low latency - in other words a small amount of time between when the hearing user says a word and when the text of that word appears on the CTS device. Because of this, it would have been obvious to look to methods in which uncorrected text is sent right away, then corrections are sent later if need be. This kind of arrangement helps eliminate the delay caused by a call assistant checking and correcting text, which could otherwise slow down the flow of text to the user. Sending uncorrected text right away would have been recognized as a particularly good option if the CTS provider's voice recognition (or other method of generating text captions) had good inherent accuracy (meaning there would be fewer errors to begin with).

In addition, in most CTS, the text captions can scroll fairly rapidly over the screen of the CTS device if necessary to keep up with the conversation. If a CTS provider were to resend an entire paragraph or chunk of the text caption that has a corrected word in it, that resent paragraph or chunk would potentially wind up scrolling off the screen so fast (as new text comes in) that it might be difficult for a user to read. In addition, that kind of method would require the user to re-read text and try to figure out what the differences are. Likewise, replacing entire paragraphs, or displaying corrected words somewhere other than in the text stream may be confusing or distracting to a user, who is also trying to comprehend and participate in the on-going conversation. If the corrected word is placed too far from the incorrect word, it may lose context.

For reasons like these, it would have been obvious for a person of ordinary skill in the art to look to ways of introducing and positioning error corrections that would insert the corrected text in place of or near the incorrect text. For example, it would have been obvious to a person of ordinary skill in the art to try a method such as disclosed in the Bridge Video Publication, because it would take up a comparatively small amount of space on the CTS device screen and would not create problems of lost context or confusion. The ultimate selection of a particular method would simply be a matter of design choice or preference, rather than R&D or “inventing” something.

Second, a person of ordinary skill in the art would have looked across various real-time text transmission applications for ideas on how to introduce and position error corrections in the text stream. Introducing error corrections into a body of text transmitted between two parties was not a new or novel concept when the ‘801 Patent was filed. It was something done in a lot of different fields, including word processing, instant messaging, court reporting, TV closed

captioning, and other fields where text is displayed to a user. I worked in the telecommunications industry for the deaf for over 38 years and I spent over 20 of those years developing and modifying TRS platforms for relay service providers and various state agencies. I have also reviewed and implemented various error correction algorithms into TRS software platforms. If I was faced with implementing or improving a product feature like how to display error corrections in a CTS system like the one in Engelke 1, I would not have hesitated to look to fields like court reporting, instant messaging, TV closed captioning, or other related technologies for concepts or ideas for visual appearance of how text and corrections are displayed. It is my opinion that other engineers would (and routinely did) also look to such fields for these kinds of ideas. Specifically, I have heard of various companies that attempted to use court reporters in TRS settings, and know that traditional TDD-based, text only relay service used call assistants who manually transcribed conversations in much the way that court reporters transcribe discussions at legal proceedings.

The way that an error correction is introduced in a text stream is essentially just a matter of design preference in how the CTS provider decides to display the correction, not necessarily an issue of implementing new technology or equipment or interfacing existing technology or equipment. For example, how an error correction is displayed in a CTS setting doesn't necessarily affect what equipment the provider uses or what communication protocols or platforms the provider uses. Instead, the choice of how to display corrections is merely an issue of preference in terms of appearance, and some minor software coding adjustments.

It is for this reason, in part, that a person of ordinary skill in the art would not have thought he or she needed to stick to only error correction methods existing within the CTS or TRS field for inspiration - there would be no real design or implementation impediment to

adopting a concept on how to display corrections from a different field in which text streams are transmitted to users and corrections take place. The Bridge Video Publication describes software for use in court reporting, which is well within the type of field a person of ordinary skill in the art would have looked at in 2009 (when the '801 Patent was filed) for ideas on how to display error corrections.

Third, substituting the method of displaying corrections taught by the Bridge Video Publication into the CTS system of Engelke 1 would be nothing more than a combination of well-known systems, with each performing the same functions for which the system had been known, yielding a predictable result. Engelke 1 discloses a CTS system. As applicable to the claims of the '801 Patent, it teaches a phone that displays to a hard-of-hearing user a text transcription of what the hearing usersays, as well as provides the audio of the hearing user at the same time. The text transcription is generated by a call assistant at a relay center revoicing the words spoken by the hard-of-hearing user into voice recognition software. If the method of displaying corrections taught by the Bridge Video Publication were to be used in Engelke, none of these functions or attributes of the Engelke 1 CTS system would change. Engelke 1 would still be a CTS system that provides the same service to its users, namely a text transcription shown at the same time as the audio of the other party to the call. And, nothing unusual or unexpected would result from using the method taught by the Bridge Video Publication. The system of Engelke 1 would simply show error corrections on the captioned phone device in-line, rather than making the corrections before the text is sent.

Fourth, modifying the Engelke 1 CTS system to include the method of displaying error corrections taught in the Bridge Video Publication would have been well within the skill in the art. Based on my 20 years of work experience developing TRS platforms and coding and

implementing specific features of TRS systems, it is my opinion that making that modification would have amounted to a simple programming change. It would take little coding effort for a programmer to change the code of a CTS system such as disclosed in Engelke 1 to (1) transmit a block of captioned text to the hard of hearing user before any error corrections are made, then (2) replace the uncorrected block of captioned text with a corrected block of captioned text generated by a CA. Based on my experience, it would take one software developer no more than 100 hours of total software developer time to accomplish such a substitution, including working up a design specification, writing the actual code, testing the software in a CTS platform or test environment, and de-bugging the code.

c. INVALIDITY CHART

Below is a chart of how the Bridge Video Publication (UTI00002052-71) and Engelke1 (UTI00002072-82) renders obvious Claims 19-23 of the '801 Patent. I have interpreted the claim elements by giving them their ordinary meaning, unless specifically stated otherwise. I incorporate my discussion of the Bridge Video Publication and Engelke 1, above, including the charts.

Claim of the '801 Patent	The Bridge Video Publication in view of Engelke1
19. The method of claim 17, wherein transmitting the text caption and the corrected block of text includes transmitting data from a relay service including a call assistant to facilitate communication between a hearing-impaired user and a hearing-capable user.	<p>As discussed above with respect to Section II(A)(2)(b), the Bridge Video Publication discloses all elements of Claim 17 of the '801 Patent.</p> <p>Engelke 1 teaches a transcription correction system for facilitating communication between a hearing user (HU) 12 and a hard-of-hearing or assisted user (AU) 14, in which a call assistant (CA) 40 located at a relay 10 transcribes the voice of the HU and transmits the text transcription to the AU 14 for presentation on a display 22. (UTI00002073 at FIG. 1, UTI00002079-2080 at 3:38-45, 5:39, and 6:34). Engelke 1 also contemplates a text error correction process</p>

Claim of the '801 Patent	The Bridge Video Publication in view of Engelke1
	<p>for the transcription involving the human CA reviewing the transcription in real time and taking actions to make needed edits or corrections. (UTI00002080 at 6:13-34).</p> <p>Because Engelke 1 teaches a first real-time text caption error correction process and the Bridge Video Publication teaches a second real-time text caption error correction process, it would have been obvious to one of ordinary skill in the art to substitute the error correction process of the Bridge Video Publication (one known element) for the error correction process of Engelke 1 (another known element) to yield a predictable result (<i>e.g.</i>, in-line correction of text for viewing in real-time by individuals having a conversation). For this reason, this claim is obvious in view of Bridge Video Publication and Engelke 1.</p>
<p>20. The method of claim 19, further comprising receiving the voice signal at the relay service for generating the text transcription of the voice signal.</p>	<p>Engelke 1 teaches that the voice signal from the hearing user is received by the relay 10. (UTI00002079 at 3:1-2).</p> <p>For the reasons discussed above with respect to Claim 19, it would have been obvious to combine the organizational structure of Engelke 1 into the system of the Bridge Video Publication.</p>
<p>21. The method of claim 20, further comprising generating the text transcription of the voice signal by employing a voice recognition program.</p>	<p>Engelke 1 teaches a speech recognition system to transcribe the voice signal. (UTI00002079 at 3:38-45).</p> <p>For the reasons discussed above with respect to Claim 19, it would have been obvious to combine the organizational structure of Engelke 1 into the system of the Bridge Video Publication.</p>
<p>22. The method of claim 21, wherein generating the text caption includes the call assistant revoicing words heard from the voice signal for the voice recognition program to generate the text caption.</p>	<p>Engelke 1 teaches that the CA can re-voice the conversation to improve accuracy of the voice recognition program. (UTI00002079 at 3:38-45).</p> <p>For the reasons discussed above with respect to Claim 19, it would have been obvious to combine the organizational structure of Engelke 1 into the system of the Bridge Video Publication.</p>
<p>23. The method of claim 19, further comprising displaying the text caption on a communication device associated with the call</p>	<p>Engelke 1 teaches that the text caption is displayed on a CA display 48 for the CA to perform error correction. (UTI00002073 at FIG. 1 and UTI00002079 at 3:38-45).</p> <p>For the reasons discussed above with respect to Claim 19, it</p>

Claim of the '801 Patent	The Bridge Video Publication in view of Engelke1
assistant.	would have been obvious to combine the organizational structure of Engelke 1 into the system of the Bridge Video Publication.

5. ADDITIONAL PRIOR ART REFERENCES.

a. OTHER INSTANT MESSAGING PUBLICATIONS OR PATENTS TO SUBSTITUTE FOR CERVANTES.

In addition to the prior art combinations described above, there are at least the following additional prior art references that could be substituted for or referred to in addition to Cervantes in those combinations: (1) United States Patent No. 7,734,702 to Kim (“the ‘702 Patent”); United States Patent No. 7,305,627 to Tannenbaum (“the ‘627 Patent”); United States Publication No. 2007/0124387 to Galloway (“the ‘387 Publication”); United States Patent No. 7,543,033 to Vincent (“the ‘033 Patent”); and United States Publication No. 2006/0161631 to Lira (“the ‘631 Publication”). Cervantes and these five prior art references disclose (1) transmitting a first uncorrected text message; (2) editing the previously sent text message; (3) transmitting the corrected text message; (4) replacing the errors in the previously sent text message with the corrected word or words in the corrected text message; and (5) tagging the corrected words in some manner to highlight the corrections to the recipient IM user. (*See* the ‘702 Patent at Cols 1-2, ll. 65-67, 1-11, Col. 4, ll. 4-21 and 41-50, Col. 6, ll. 11-21, Figs. 2, 3A and 3B; *see also* the ‘627 Patent at Abstract, Figs. 5-8, Col. 1-2, ll. 54-67 and 1-2, Col. 2, ll. 24-39, Col. 9, ll. 36-40, Col. 10, ll. 33-48; *see also* the ‘387 Publication at Abstract, Figs. 3A-3D, paragraphs 23-25, 28, 32-33; *see also* the ‘033 Patent at Abstract, Col. 3, ll. 38-45, Col. 4, ll. 5-10 and 20-27; *see also* the ‘631 Publication at Abstract, Figs. 9A-9H, paragraphs 11-15, 75-80).

These additional references further support my opinion that the purported inventions related to in-line corrections using tagging to identify the corrected text claimed in the '801 Patent was well known in the art before the alleged invention and before the application for the '801 Patent was filed. One skilled in the art would have known about in-line corrections and tagging being done in instant messaging systems and it would have been obvious to use this in a CTS system.

b. UNITED STATES PUBLICATION NO. 2002/0194278 TO GOLAN ("THE '278 PUBLICATION") IN COMBINATION WITH ENGELKE 2, RYAN, OR THE BRIDGE PUBLICATION

Another piece of prior art that a person of ordinary skill in the art would have looked to is the '278 Publication. The '278 Publication is directed to an email system that allows a sender to correct any errors in a previously transmitted email. (*See* Abstract). The sender transmits an email to a recipient that may contain errors. (Abstract, paragraphs 1, 6-7, 21-22, and 30). The sender may correct any errors in a previously transmitted e-mail and then transmit the corrected e-mail to the recipient. (*Id.*, Figure 3). The '278 Publication further discloses a preferred embodiment as "[p]referably, only the corrected version of the message is displayed to the recipient." (*Id.*). This reference also discloses that the corrected text should be highlighted using some type of notification means, "[m]ost preferably, the recipient only knows that the message is a corrected version of a previous message according to a notification." (*Id.*). Figure 2 shows that changing the font of the corrected word to make it bold lettering is one highlighting method used. It would be obvious to employ any other highlighting method (i.e., changing the color of the corrected word).

This is yet another example of an application program that performs in-line error correction and tagging the corrected words. Court reporting, instant messaging, and e-mail

systems are just some of the different fields that one would research when deciding whether to use in-line corrections in a real-time CTS system. Therefore, for the same reasons as stated in the obviousness combinations using Cervantes or the Bridge Video Publication, it would have been obvious to combine the '278 Publication with Engelke 1, Engelke 2, or Ryan to render all of the '801 Patent claims obvious at the time of the purported invention. Again, I incorporate my discussion of those prior art references above.

c. THE COMBINATION OF UNITED STATES PATENT NO. 6,510,206 TO ENGELKE ("ENGELKE 3") AND UNITED STATES PATENT NO. 5,809,112 TO RYAN ("RYAN") RENDERS CLAIMS 1-16 AND 25-29 OF THE '801 PATENT OBVIOUS

Engelke 3 is another piece of prior art a person of ordinary skill in the art would look to . Engelke 3 discloses a CTS system that sends the voice of a hearing user to a first call assistant where the first call assistant revoices the words spoken by the hearing user. (Col. 2, ll. 47-56, Col. 6, ll. 6-10, Col. 7, ll. 7-19). A text caption of the voice transcription is created after the first call assistant revoices the hearing users words. (*Id.*). Engelke 3 further discloses using a second call assistant who only corrects the errors of the transcribed text captions created by the first call assistant. (Cols. 8-9, ll. 63-67. 1-6). The uncorrected text caption is displayed on both the first and second call assistant's computer screen. The second call assistant corrects the errors in the uncorrected text caption before transmitting to the hard-of-hearing user's device. (*Id.*). Therefore, the second call assistant performs some type of error correction before transmitting the corrected text caption to the hard-of-hearing user. (*Id.*).

Engelke 3 is a real-time CTS system that transfers a text caption to a second call assistant to perform error corrections. A person of ordinary skill in the art would look at all relevant CTS systems in the prior art and therefore would review Engelke 3 and Ryan (discussed in section

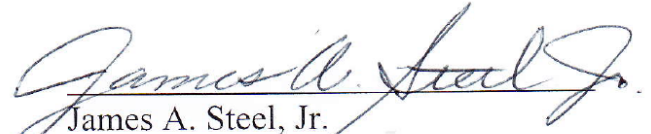
II(A)(4) and II(B)(2).. Furthermore, a person of ordinary skill in the art would review the error correction methods used by both Engelke 3 and Ryan and further look at Ryan to review different tagging options in the prior art. Both Engelke 3 and Ryan are known prior art elements that would perform the same function and yield the same predictable results in combination. Therefore, it would have been obvious to combine these references to use tagging with the error correction method of Engelke 3.

III. CONCLUSION

Based on the prior art references cited in this report, it is my opinion that these references either anticipate and/or render obvious (in some combination) the '801 Patent. There are only a finite number of ways to introduce or position a corrected word or phrase into a text caption stream and a person of ordinary skill in the art would be directed to review other real-time applications (e.g., court reporting, instant messaging, other CTS systems) to understand how these real-time applications introduced or positioned corrected words or phrases. As a software engineer with over 20 years of experience developing TRS applications (including error correction), it is my opinion that transmitting a block of text either before or after corrections are made by a call assistant is a mere design choice and would require little programming effort to switch from one method to the other. Furthermore, as shown above, there are many prior art references that disclose using in-line error corrections. Therefore, it would have been obvious to try in-line error correction in a TRS system like Ryan, Engelke 1, or Engelke 2 and it would require insubstantial changes to the programming code to modify those TRS systems to first send an uncorrected text caption and later replace with a corrected text caption if necessary (my report explains above in more detail the basis for this contention).

Accordingly, it is my opinion that all of the patent claims of the '801 Patent are anticipated and/or obvious, for the reasons stated above.

I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct, executed this 12th day of February, 2014.


James A. Steel, Jr.